# Michigan State Employees Retirement System



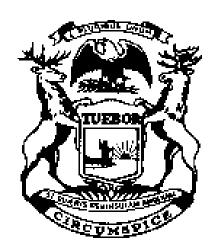
Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 1999

A Pension Trust Fund of the State of Michigan

John Engler, Governor

## Michigan State Employees' Retirement System a Pension Trust Fund of the State of Michigan

## Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 1999



## **MSERS**

Prepared by:
Office of Retirement Services
P.O. Box 30171
Lansing, Michigan 48909-7671
517-322-5103
1-800-381-5111

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The cost of printing this report was \$1,253.39 (2.63 each), which was paid for by the retirement system at no cost to taxpayers.

## **INTRODUCTORY SECTION**

Certificate of Achievement Letter of Transmittal Board Members Advisors & Consultants Organization Chart

### **Certificate of Achievement**

Certificate of Achievement for Excellence in Financial Reporting

Presented to

## Michigan State Employees Retirement System

For its Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 1998

A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.



#### **Letter of Transmittal**

State Employees' Retirement System P.O. Box 30171 Lansing, Michigan 48909 Telephone 517-322-5103 Outside Lansing 1-800-381-5111

#### STATE OF MICHIGAN

JOHN ENGLER, Governor

#### DEPARTMENT OF MANAGEMENT AND BUDGET

February 10, 2000

The Honorable John Engler Governor, State of Michigan,

Members of the Legislature State of Michigan

Retirement Board Members Members, Retirees and Beneficiaries

Ladies and Gentlemen:

We are pleased to present the annual report of the Michigan State Employees' Retirement System (System) for fiscal year 1999.

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the leadership team of the System. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the System.

The Michigan State Employees' Retirement System was established by legislation under Public Act 240 of 1943 (the State Employees' Retirement Act) and is administered by the Office of Retirement Services (ORS). The number of active and retired members and beneficiaries of the System is presented in Note 1 of the financial statements in the Financial Section of this report. The services performed by the staff provide benefits to members.

The 1999 annual report is presented in five sections. The Introductory Section contains the transmittal letter, and identifies the administrative organization and professional consultants used by the System. The Financial Section contains the independent auditors' report, the financial statements of the System and certain supplemental schedules. The Investment Section summarizes investment activities. The Actuarial Section contains the independent consulting actuary's certification, an outline of actuarial assumptions and methods, and other actuarial statistics. The Statistical Section contains statistical tables of significant data pertaining to the System.

# **Letter of Transmittal** (Continued)

#### MAJOR GOALS ACCOMPLISHED

Providing excellent service to Office of Retirement Services customers now and into the future requires a focused effort by management and staff. This year, ORS began strategic planning to move ORS towards its newly established mission and vision, which are:

ORS Mission: We deliver pensions, related benefits and services to promote the future financial security of our customers.

ORS Vision: Fast, easy access to complete and accurate information and exceptional service.

The State of Michigan worked aggressively to ensure compliance with Year 2000 requirements for the state's critical information systems, including the state's retirement systems. In ORS, systems such as those which handle member billings, service credit evaluations, beneficiary nominations, and the payment of retiree pensions and 1099R distribution were all completed by September 30, 1999.

ORS designed a contingency plan to make sure customer records were protected and business processes would continue on schedule if a natural disaster struck, or systems and processes outside of ORS created potential business disruptions if they were not adequately compliant for Year 2000. Contingency plans were in place to ensure ORS could continue to provide essential services, such as issuing monthly pension payments, placing new pension recipients on payroll, and enrolling retirees in their appropriate insurance plans. ORS is pleased to report that no service or system disruptions were experienced due to Year 2000.

ORS is identified by other organizations across the country for the use of innovative solutions to problems. Several companies and governmental entities, including Blue Cross/Blue Shield of Michigan, the State of New Jersey Division of Pension and Benefits, Minnesota Teachers' Retirement System, Oregon Public Employees' Retirement System, and the Segal Company, sent representatives to hear about ORS' techniques for responding to major organizational changes, reengineering business processes, and striving to be a more customer-focused organization. One of the major areas of interest was the Customer Information Center (CIC) telephone response group. The CIC services approximately 240 personal counseling visits per month and handles an average of 13,733 of the 19,776 telephone calls ORS receives each month.

New channels of communication have been created to keep in touch with ORS' various customers. The *Connections* retiree newsletter continues to provide pension recipients with a link to current activities at ORS. Other newsletters reach ORS staff and human resource offices, with additional newsletters in development to reach other specialty audiences. Providing updates to interested parties has become easier with the introduction of ListServ technology which allows individuals to "subscribe" to an Internet notification system. ORS staff have been able to efficiently reach larger audiences in remote locations with timely information using video conferencing and satellite broadcasting.

In February 1999, ORS launched a new Internet web site to make available a wealth of information to interested parties, and allow interactive communications between customers and staff. ORS customers can now access copies of publications, forms, retirement acts, and pension calculation estimators, along with general information about the Retirement System.

As of January 1, 2000, pending State retirees will be able to select from an additional pension payment option – the 75% Survivor Pension option. Processes required to implement this new program, and communications plans to inform State employees of its availability are complete.

# Letter of Transmittal (Continued)

In July, ORS released a brand new comprehensive information booklet, the State Employees Retirement Guidelines, which provides State employees and retirees participating in the Defined Benefit Plan with specific details about their retirement plan benefits.

A semi-annual survey is being used to evaluate State retirees' level of satisfaction with the services they receive.

#### CERTIFICATE OF ACHIEVEMENT

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the System for its comprehensive annual financial report for the fiscal year ended September 30, 1998.

In order to be awarded the Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

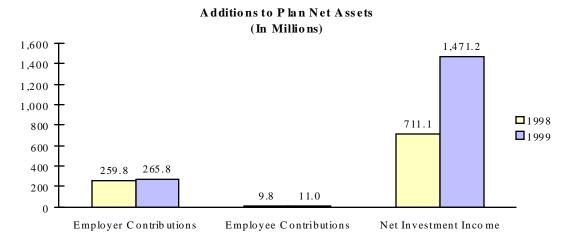
A Certificate of Achievement is valid for a period of one year only. We believe our current report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

#### FINANCIAL INFORMATION

#### Additions to Plan Net Assets

The reserves needed to finance retirement and health benefits are accumulated through the collection of employer contributions and through earnings on investments. Contributions and net investment income for fiscal year 1999 totaled approximately \$1.7 billion. Net investment income accounted for 84.2% and employer contributions accounted for 15.2% of the total revenue.

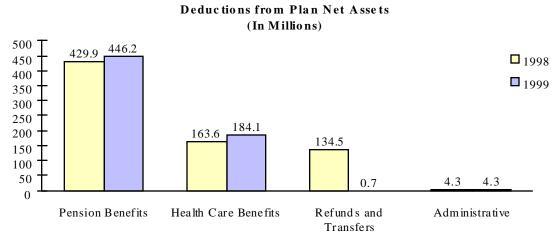
Total contributions and net investment income increased 78.3% from those of the prior year due primarily to increased investment earnings. Employee contributions increased 13.0%, employer contributions increased 2.3% and net investment income (including interest income) increased 107% from the prior year. The Investment Section of this report reviews the results of investment activity for 1999.



# **Letter of Transmittal** (Continued)

#### Deductions From Plan Net Assets

The primary expenditures of the System include the payment of pension benefits to members and beneficiaries, payments for health, dental and vision benefits, refund of contributions to former members, and cost of administering the System. The growth of health care expenditures continued during the year. As a result, expenditures for health care increased by \$20.5 million from \$163.6 million to \$184.1 million during the fiscal year. Total deductions for fiscal year 1999 were \$635.4 million, a decrease of 13.2% from 1998 deductions. During fiscal year 1998, the Michigan State Employees Retirement Act provided an opportunity for members to transfer to the defined contribution plan. A total of 1,469 individuals with funds totaling \$133.9 million were transferred. If that amount had not been deducted in 1998, the expenditures would have increased approximately 6.2% rather than decreased. Refunds were \$21.1 thousand compared to \$18.6 thousand in 1998.



#### Internal Control

The leadership team of the System is responsible for maintaining adequate internal accounting controls designed to provide reasonable assurance that transactions are executed in accordance with management's general or specific authorization, and are recorded as necessary to maintain accountability for assets and to permit preparation of financial statements in accordance with generally accepted accounting principles. The internal control process is designed to provide reasonable assurance regarding the safekeeping of assets and reliability of all financial records.

#### INVESTMENT

The State Treasurer is the investment fiduciary and custodian of all investments of the System pursuant to state law. The primary investment objective is to maximize the rate of return on the total investment portfolio, consistent with a high degree of prudence and sufficient diversity to eliminate inordinate risks and to meet the actuarial assumption for the investment return rate. The investment activity for the year produced a total rate of return on the portfolio of 16.3%. For the last five years, the System has experienced an annualized dollar weighted rate of return of 15.8%. A summary of asset allocation and rates of return can be found in the Investment Section of this report.

#### **FUNDING**

Funds are derived from the excess of additions to plan net assets over deductions from plan net assets. Funds are accumulated by the System in order to meet future benefit obligations to retirees and beneficiaries. The percentage computed by dividing the actuarial value of assets over the actuarial accrued liability is referred to as the "funded ratio." This ratio

## **Letter of Transmittal** (Continued)

provides an indication of the funding status of the System and, generally, the greater this percentage, the stronger the System. As of September 30, 1999, the actuarial value of the assets and actuarial accrued liability of the fund were \$9.6 billion and \$9.0 billion respectively resulting in a funded ratio of 106.9%. As of September 30, 1998, the amounts were \$9.1 billion and \$8.5 billion. A historical perspective of funding levels for the System is presented on the Schedule of Funding Progress in the Required Supplementary Information in the Financial Section of this report.

#### POSTEMPLOYMENT BENEFITS

The System also administers the postemployment health benefits (health, dental and vision) offered to retirees. The benefits are funded on a cash or "pay as you go" basis. An actuarial valuation was completed to determine the actuarial accrued liability if the benefit were to be pre-funded. If these benefits were pre-funded, the actuarial accrued liability for these benefits would be in excess of \$5.0 billion and the employer contribution for health care benefit would be 15.05%. Only members of the defined benefit plan were included when calculating the actuarial accrued liability.

#### PROFESSIONAL SERVICES

An annual audit of the System was conducted by Andrews Hooper & Pavlik P.L.C., independent auditors. The auditors' report on the System's financial statements is included in the Financial Section of this report.

Statute requires an annual actuarial valuation be conducted. The purpose of the valuation is to evaluate the mortality, service, compensation and other financial experience of the System and to recommend employer funding rates for the subsequent year. This annual actuarial valuation was completed by the Segal Company for the fiscal years ended September 30, 1999 and 1998. Actuarial certification and supporting statistics are included in the Actuarial Section of this report.

#### **ACKNOWLEDGMENTS**

The preparation of this report was accomplished with the dedication and cooperation of many people. It is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship of the funds of the System.

We would, therefore, like to express our appreciation for the assistance given by staff, the advisors and many people who contributed to its preparation. We believe their combined efforts have produced a report that will enable the employers and plan members to better evaluate and understand the Michigan State Employees' Retirement System. Their cooperation contributes significantly to the success of the System.

Sincerely,

Janet E. Phipps, Director

Department of Management and Budget

hustopher M. DeRose

Christopher M. DeRose, Director Office of Retirement Services

## **Administrative Organization**

#### **Retirement Board Members**

R. Douglas Trezise, ChairRetiree MemberTerm Expires July 31, 2000

Janine Winters Employee Member Term Expires July 31, 2000

Janet McClelland Employee Member Term Expires July 31, 1999 Roy Pentilla, CPA Representing State Treasurer Statutory Member

George M. Elworth Representing Attorney General Statutory Member

D. Daniel McLellan Representing State Personnel Director Statutory Member Dr. James S. Neubecker, CPA Deputy Auditor General Statutory Member

John Schoonmaker Representing State Insurance Commissioner Statutory Member

Doug Drake Retiree Member Term Expires July 31, 2001

#### **Administrative Organization**

Department of Management and Budget Office of Retirement Systems P.O. Box 30171 Lansing, Michigan 48909-7671 517-322-5103 1-800-381-5111

#### **Advisors and Consultants**

#### Actuary

The Segal Company Michael J. Karlin, F.S.A., M.A.A.A. New York, New York

#### Auditors

Thomas H. McTavish, C.P.A. Auditor General State of Michigan

Andrews Hooper & Pavlik P.L.C. Jeffrey J. Fineis, C.P.A. Okemos, Michigan

## **Investment Manager and Custodian**

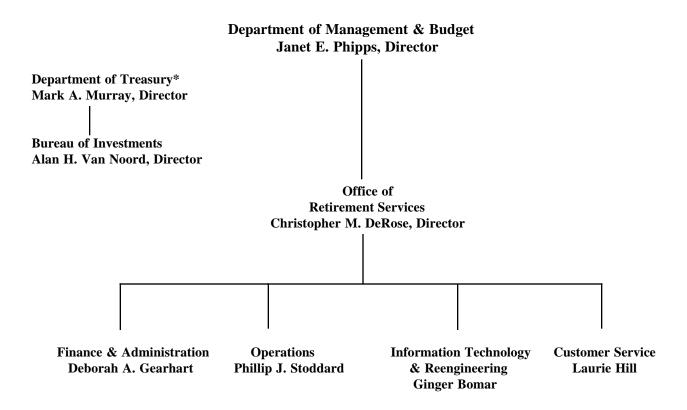
Mark A. Murray State Treasurer State of Michigan

Legal Advisor

Jennifer M. Granholm Attorney General State of Michigan Investment Performance Measurement Capital Resource Advisors Chicago, Illinois

## **Administrative Organization**

#### **Organization Chart**



<sup>\*</sup> The investments of the system are managed by the Michigan Department of Treasury. Information on the investments and the fiduciary, Michigan Department of Treasury, can be found in the Investment Section.

Independent Auditors' Report
Statements of Plan Net Assets
Statements of Changes in Plan Net Assets
Notes to Financial Statements
Required Supplementary Information
Supporting Schedules

## **Independent Auditors' Report**



Ms. Janet Phipps, Director
Department of Management and Budget
Mr. Christopher M. DeRose, Director
Office of Retirement Systems
Mr. Thomas H. McTavish, CPA
Auditor General
Michigan State Employees
Retirement System Board

We have audited the accompanying statements of pension plan and postemployment healthcare plan net assets of the Michigan State Employees Retirement System, as of September 30, 1999 and 1998, and the related statements of changes in pension plan and postemployment healthcare plan net assets for the years then ended. These financial statements are the responsibility of the management of the Michigan State Employees Retirement System. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards and *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to in the first paragraph present fairly, in all material respects, the financial position of the Michigan State Employees Retirement System, as of September 30, 1999 and 1998, and the changes in plan net assets for the years then ended in conformity with generally accepted accounting principles.

Our audit was conducted for the purpose of forming an opinion on the financial statements taken as a whole. The required supplementary information and supporting schedules listed in the table of contents are presented for the purpose of additional analysis and are not a required part of the basic financial statements. The required supplementary information and supporting schedules are the responsibility of the System's management. The Schedules of Funding Progress and Employer Contributions and related notes on pages 26 to 28 and the supporting schedules on pages 30 to 33 have been subjected to the auditing procedures applied in our audits of the basic financial statements and, in our opinion, are fairly stated in all material respects when considered in relation to the basic financial statements taken as a whole. The Year 2000 information on page 29 is not a required part of the basic financial statements but is supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and do not express an opinion on it. In addition, we do not provide assurance that Michigan State Employees Retirement System is or will become year 2000 compliant, that Michigan State Employees Retirement System does business are or will become year 2000 compliant.

In accordance with *Government Auditing Standards*, we have also issued a report dated January 27, 2000 on our consideration of the Michigan State Employees Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, and contracts.

January 27, 2000

4295 Okemos Road, Suite 200 • Okemos, Michigan 48864 • ph 517.487.5000 fx 517.487.9535 • www.ahpplc.com

andrews Goope & Favlik P.L.C.

## Statements of Pension Plan and Postemployment Healthcare Plan Net Assets

As of fiscal year end September 30, 1999, and 1998

	September 30, 1999		September 30, 1998			
	Pension	Health		Pension	Health	
	Plan	Plan	Total	Plan	Plan	Total
Ass ets:	·					
Cash	\$ 59,392,238	\$ 273,451	\$ 59,665,689	\$ 22,580,235	\$ 187,946	\$ 22,768,181
Receivables:						
Amounts due from employers	11,006,485	50,675	11,057,160	12,871,636	107,137	12,978,773
Interest and dividends	41,951,824	193,153	42,144,977	37,348,476	310,870	37,659,346
Sale of Investments	7,431,608	34,216	7,465,824	6,379,151	53,097	6,432,248
Total receivables	60,389,917	278,044	60,667,961	56,599,263	471,104	57,070,367
Investments:						
Short term investment	223,873,552	1,030,748	224,904,300	354,151,709	2,947,779	357,099,488
Bonds, notes, and mort gages and preferred stock	2,271,066,543	10,456,334	2,281,522,877	2,259,065,931	18,803,318	2,277,869,249
Common stock	5,243,863,719	24,143,542	5,268,007,261	4,474,637,606	37,244,613	4,511,882,219
Re al est at e	783,559,113	3,607,624	787,166,737	751,798,004	6,257,585	758,055,589
Alternative investments	1,027,335,139	4,730,006	1,032,065,145	809,358,964	6,736,693	816,095,657
International investments	580,370,116	2,672,112	583,042,228	372,719,070	3,102,324	375,821,394
Collateral on loaned securities	312,143,756	1,437,157	313,580,913	377,603,702	3,142,982	380,746,684
Total investments	10,442,211,938	48,077,523	10,490,289,461	9,399,334,986	78,235,294	9,477,570,280
Total assets	10,561,994,093	48,629,018	10,610,623,111	9,478,514,484	78,894,344	9,557,408,828
Liabilities:						
Warrants outstanding	2,534,717	11,670	2,546,387	2,914,772	24,261	2,939,033
Accounts payable and		ŕ			•	
other accrued liabilities	22,435,014	103,294	22,538,308	14,339,268	119,353	14,458,621
Obligations under securties lending	312,143,756	1,437,157	313,580,913	377,603,702	3,142,982	380,746,684
Total liabilities	337,113,487	1,552,121	338,665,608	394,857,742	3,286,596	398,144,338
Restricted Net Assets - DC Savings		170,600	170,600			
Unrestricted Net Assets	10,224,880,606	46,906,297	10,271,786,903	9,083,656,742	75,607,748	9,159,264,490
Net Assets Held for Pension						
and Healthcare Benefits*	\$10,224,880,606	\$ 47,076,897	\$10,271,957,503	\$9,083,656,742	\$ 75,607,748	\$9,159,264,490

<sup>\*</sup>A schedule of funding progress is presented in the Required Supplementary Information in the Financial Section.

The accompanying notes are an integral part of these financial statements

## **Statements of Changes in Pension Plan and Postemployment Healthcare Plan Net Assets**

For the fiscal years ended September 30, 1999, and 1998

	September 30, 1999		September 30, 1998			
	Pension	Health		Pension	Health	
	Plan	Plan	Total	Plan	Plan	Total
A 1 W d						
Additions:  Members contributions:						
Other	\$ 5,112,467	\$ 4,861,628	\$ 9,974,095	\$ 3,735,468	\$ 4,619,101	\$ 8,354,569
Military	1,073,551	\$ 4,801,028	1,073,551	1,423,276	\$ 4,019,101	1,423,276
Employer contributions	121,119,857	144,515,776	265,635,633	147,599,551	112,199,628	259,799,179
DC Savings	121,119,037	170,600	170,600	147,399,331	112,199,028	239,199,119
Investment income:		170,000	170,000			
Investment income	1,475,060,958		1,475,060,958	708,481,812		708,481,812
Securitites lending income	17,317,384		17,317,384	16,584,243		16,584243
Real estate operating expenses	(1,163,465)		(1,163,465)	(646,133)		(646,133)
Securities lending expenses	(16,330,884)		(16,330,884)	(16,053,905)		(16,053,905)
Other investment expenses	(9,687,920)		(9,687,920)	(6,308,082)		(6,308,082)
Interest Income	(>,==+,	6,048,620	6,048,620	(0,00,00=)	8,998,673	8,998,673
Miscellaneous income	159		159	381		381
Total additions	1,592,502,107	155,596,624	1,748,098,731	854,816,611	125,817,402	980,634,013
Deductions:						
Retirement allowances	446,219,254		446,219,254	429,879,875		429,879,875
Employer share of health insurance		169,003,923	169,003,923		148,458,180	148,458,180
Employer share of dental/vision insurar	nce	15,123,552	15,123,552		15,115,875	15,115,875
Refunds of member contributions	21,110		21,110	18,555		18,555
Transfers to other systems	707,256		707,256	134,515,208		134,515,208
Administrative	4,330,623		4,330,623	4,297,092		4,297,092
Total deductions	451,278,243	184,127,475	635,405,718	568,710,730	163,574,055	732,284,785
Net Increase (Decrease)	1,141,223,864	(28,530,851)	1,112,693,013	286,105,881	(37,756,653)	248,349,228
Net Assets Heldin Trust						
for Pension and Healthcare Bene	fits:					
Beginning of Year	9,083,656,742	75,607,748	9,159,264,490	8,797,550,861	113,364,401	8,910,915,262
End of Year*	\$10,224,880,606	\$47,076,897	\$10,271,957,503	\$ 9,083,656,742	\$75,607,748	\$9,159,264,490

<sup>\*</sup>A schedule of funding progress is presented in the required supplementary information in the Financial Section.

The accompanying notes are an integral part of these financial statements.

#### Notes to General Purpose Financial Statements

#### **NOTE 1 - PLAN DESCRIPTION**

#### **ORGANIZATION**

The Michigan State Employees' Retirement System is a multiple employer, state-wide, defined benefit public employee retirement plan governed by the State of Michigan (State) and created under Public Act 240 of 1943, as amended. The System was established by the State to provide retirement, survivor and disability benefits to the State's government employees. The System is a qualified trust fund under section 401(a) of the Internal Revenue Code. By statute, employees of the following employers are also covered by this plan: American Legion, American Veterans, Disabled American Veterans, Probate Judges, Mackinac Island State Park, Marine Corps League, Michigan Bar Association, Michigan Veterans Trust Fund, Military Order of the Purple Heart, Commission for Independent Vendors, Third Circuit Court, Recorders Court and 36th District Court. Michigan judges and elected officials, legislators, national guard and state police officers are covered by separate retirement plans.

The System's financial statements are included as a pension trust fund in the combined financial statements of the State of Michigan.

The System is administered by the Office of Retirement Services, within the Michigan Department of Management and Budget. The Department Director appoints the Office Director who serves as Executive Secretary to the System's Board, with whom the general oversight of the System resides. The State Treasurer serves as the investment officer and custodian for the System.

#### **MEMBERSHIP**

At September 30, 1999 and 1998, the System's membership consisted of the following:

Retirees and beneficiaries		
currently receiving benefits:	<u> 1999</u>	<u> 1998</u>
Regular benefits	28,403	28,480
Survivor benefits	5,039	4,928
Disability benefits	2,904	2,777
Total	36,346	36,185
Current employees:		
Vested	36,745	35,235
Non-vested	12,867	14,482
Total	49,612	49,717
Inactive employees entitled		
to benefits and not yet receiving them	7,376	8,021
Total All Members	93,334	93,923

Enrollment in the health care fund is voluntary. The number of participants is as follows:

Health/Dental/Vision Plan	1999	1998
Eligible participants	36,346	36,185
Participants receiving benefits:		
Health	33,478	33,384
Dental	32,712	32,468
Vision	32,858	32,654

#### **Notes to General Purpose Financial Statements**

#### BENEFIT PROVISIONS

#### Introduction

Benefit provisions of the defined benefit pension plan are established by state statute, which may be amended. Public Act 240 of 1943, State Employees' Retirement Act, as amended, establishes eligibility and benefit provisions for the defined benefit pension plan. Retirement benefits are determined by final average compensation and years of service. Members are eligible to receive a monthly benefit when they meet certain age and service requirements. The System also provides duty disability, non-duty disability and survivor benefits.

Members who have separated from employment may request a refund of his or her member contribution account. (The System is currently non-contributory.) A refund cancels a former member's rights to future benefits. Former members who return to employment and who previously received a refund of their contributions may reinstate their service through repayment of the refund upon satisfaction of certain requirements.

Effective March 31, 1997, Public Act 487 of 1996 closed the plan to new entrants. All new employees become members of the defined contribution plan. The Public Act allows returning employees and members who left state employment on or before March 31, 1997, to elect the defined benefit plan instead of the defined contribution plan.

#### Regular Retirement

The retirement benefit is based on a member's years of credited service (employment), age, and final average compensation. The normal benefit equals 1.5% of a member's final average compensation multiplied by the years of credited service and is payable monthly over the member's lifetime.

Final average compensation is the average of a member's monthly pay during 36 consecutive months of credited service. The 36 consecutive month period producing the highest monthly average is used. For most members, this is the last three years of employment.

A member may retire and receive a monthly benefit after attaining:

- 1. age 60 with 10 or more years of credited service; or
- 2. age 55 with 30 or more years of credited service; or
- 3. age 55 with at least 15 but less than 30 years of credited service. The benefit allowance is permanently reduced 0.5% for each month from the member's age on the effective date of retirement to the date the member will attain age 60.

Employees in covered positions are eligible for supplemental benefits and may retire after attaining:

- 1. age 51 with 25 or more years in a covered position; or
- 2. age 56 with 10 or more years in a covered position.

In either case, the three years immediately preceding retirement must have been in a covered position. Employees in covered positions are responsible for the custody and supervision of inmates.

Employees of closing Department of Community Health facilities are eligible for retirement under one of the following conditions:

- 1. age 51 with 25 years of service, the last 5 of which were rendered in the closing facility;
- 2. age 56 with 10 years of service, the last 5 of which were rendered in the closing facility; or
- 3. 25 years of service at the closing facility regardless of age.

#### **Notes to General Purpose Financial Statements**

Employees of the State Accident Fund, Michigan Biologic Products or Liquor Control Commission who were terminated as the result of privatization may retire if the member's age and length of service was equal to or greater than 70 on the date of transfer or termination.

Conservation Officers (CO) with a hire date on or before April 1, 1991, are eligible to retire after 25 years of service, 20 of which must have been rendered as a CO. CO's hired after April 1, 1991 and before March 31, 1997, must have 23 years of service as a CO to be eligible for a full retirement with only 25 years of service. In either case, 2 years immediately preceding retirement must be as a CO.

#### Deferred Retirement

Any member with 10 or more years of credited service who terminates employment but has not reached the age of 60 is a deferred member and is entitled to receive a monthly pension upon reaching age 60, provided the member's accumulated contributions have not been refunded. Deferred retirement is available after 5 years of service for State employees occupying unclassified positions in the executive and legislative branches and certain Department of Community Health employees subject to reduction in force lay-offs by reason of deinstitutionalization.

#### Non-Duty Disability Benefit

A member with 10 or more years of credited service who becomes totally and permanently disabled not due to performing duties as a state employee is eligible for a non-duty disability pension. The non-duty disability benefit is computed in the same manner as an age and service allowance based upon service and salary at the time of disability.

#### **Duty Disability Benefit**

A member who becomes totally and permanently disabled from performing duties as a state employee as a direct result of state employment and who has not met the age and service requirement for a regular pension, is eligible for a duty disability pension. If the member is under age 60, the duty disability allowance is a maximum payment of \$6,000 payable annually. At age 60 the benefit is recomputed under service retirement.

#### Survivor Benefit

Upon the death of a member who was vested, the surviving spouse shall receive a benefit calculated as if the member had retired the day before the date of death and selected Option A (see below). Certain designated beneficiaries can be named to receive a survivor benefit.

#### **Pension Payment Options**

When applying for retirement, an employee may name a person other than his or her spouse as a beneficiary if the spouse waives this right. If a beneficiary is named, the employee must choose whether the beneficiary will receive 100% or 50% of the retiree's pension benefit after the retiree's death. The decision is irrevocable. A description of the options follows.

Regular Pension — The pension benefit is computed with no beneficiary rights. If the retiree made contributions while an employee and has not received the total accumulated contributions before death, a refund of the balance of the contributions is made to the beneficiary of record. If the retiree did not make any contributions, there will not be payments to beneficiaries.

100% Survivor Pension — Under this option, after the retiree's death, the beneficiary will receive 100% of the pension for the remainder of the beneficiary's lifetime. If this option is elected, the normal retirement benefit is reduced by a factor based upon the ages of the retiree and of the beneficiary. If the beneficiary predeceases the retiree, the pension "pops-up" to the regular pension amount; another beneficiary cannot be named.

#### **Notes to General Purpose Financial Statements**

50% Survivor Pension — Under this option, after the retiree's death, the beneficiary will receive 50% of the pension for the remainder of the beneficiary's lifetime. If this option is elected, the normal retirement benefit is reduced by a factor based upon the ages of the retiree and of the beneficiary. The reduction factor is lower than the factor used in Option A above. If the beneficiary predeceases the retiree, the pension "pops-up" to the regular pension amount; another beneficiary cannot be named. Beginning January 1, 2000, a 75% Survivor Pension will also be available.

Equated Pension — An equated pension may be chosen by any member under age 65 except a disability retiree and an early supplemental retiree. Equated pensions provide an additional amount until age 65 and may be combined with Regular, Option A or B. At age 65 the monthly amount is permanently reduced. The initial and reduced amounts are based on an estimate of social security benefits at age 65. Social security benefits are estimated by using age, final salary average, and State service. The actual amount received from social security may vary from the estimate.

#### Post Retirement Adjustments

One time upward benefit adjustments were made in 1972, 1974, 1976, 1977 and 1987. Beginning October 1, 1988, a 3% non-compounding increase, up to a maximum of \$25 monthly, is paid each October to recipients who have been retired 12 full months. Beginning in 1983, eligible benefit recipients share in a distribution of investment income earned in excess of 8% annually. This distribution is known as the supplemental payment. The supplemental payment is offset by one year's cumulative increases received after the implementation of the annual 3% increase in benefits. These adjustment payments were not issued during fiscal years 1991 through 1994. Members who retired on or after October 1, 1987, are not eligible for the supplemental payment.

#### **Contributions**

Member Contributions — Members currently participate in the System on a noncontributory basis. Under certain circumstances, members may contribute to the System for the purchase of creditable service, such as military service or maternity leave, or a universal buy-in. If a member terminates the System employment before a retirement benefit is payable, the member's contribution and interest on deposit may be refunded. If the member dies before being vested, the member's contribution and interest are refunded to the designated beneficiaries.

Employer contributions — The statute requires the employer to contribute to finance the benefits of plan members. These employer contributions are determined annually by the System's actuary and are based upon level-percent-of-payroll funding principles so the contribution rates do not have to increase over time.

#### Transfers to Defined Contribution Plan

During fiscal year 1998, the Michigan State Employees' Retirement Act provided members an opportunity to transfer to the defined contribution plan. This was a one-time opportunity and the decision is irrevocable. The transfer was completed by September 30, 1998. A total of 1,469 vested individuals with funds totaling \$133.9 million were transferred. In addition 1,927 non vested individuals with no funds were transferred. With the passage of the legislation permitting the transfer, the System also became a closed system. All new employees are members of the defined contribution plan.

#### Other PostEmployment Benefits

Under the State Employees Retirement Act, all retirees have the option of receiving health, prescription, dental and vision coverage. The employer funds health benefits on a pay-as-you-go basis. Retirees with this coverage contribute 5% and 10% of the monthly premium amount for the health, dental and vision coverage, respectively. The employer's payroll contribution rate to provide this benefit was 5.5% and 5.0% for fiscal years 1999 and 1998 respectively.

#### Notes to General Purpose Financial Statements

#### NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### Basis of Accounting and Presentation

The System's financial statements are prepared using the accrual basis of accounting. Contributions from the State are recognized as revenue in the period in which employees provide service. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

#### Reserves

Public Act 240 of 1943, as amended, created the employees' savings reserve, employer's accumulation reserve, pension reserve, income account, expense account, and health insurance reserve. The financial transactions of the plan are recorded in these accounts as required by Public Act 240 of 1943, as amended.

Employees' Savings Reserve — Members no longer contribute to this fund except to purchase eligible service credit or repay previously refunded contributions. This fund represents active member contributions and interest less amounts transferred to the Pension Reserve for regular and disability retirement, amounts refunded to terminated members and unclaimed amounts transferred to the income account. At September 30, 1999, and 1998, the balance in this account was \$5.1 million and \$2.1 million respectively.

Pension Reserve — This represents the reserves for payment of future retirement benefits to current retirees. At retirement, a member's accumulated contributions plus interest are transferred into this reserve from the Employee's Savings Reserve. Monthly benefits, which are paid to the retiree, reduce the reserve. At the end of each fiscal year, an amount determined by an annual actuarial valuation is transferred from the Employer Accumulation Reserve to this reserve to bring the balance into balance with the actuarial present value of retirement allowances. At September 30, 1999 and 1998, the balance in this account was \$4.4 billion and \$4.2 billion respectively.

Employer Accumulation Reserve — All employer contributions are credited to this reserve. Interest from the income account is credited annually. Amounts are transferred annually from this reserve to the Pension Reserve to fund that reserve. At September 30, 1999 and 1998, the balance in this account was \$3.1 billion and \$3 billion respectively.

Income Account and Expense Account — The income account is credited with all investment earnings. Interest is transferred annually to the reserves. Administrative expenses are paid from the expense account. The legislature appropriates the funds necessary to defray and cover the administrative expense of the plan. At September 30, 1999 and 1998, the net balance of these accounts was \$2.7 billion and \$1.9 billion respectively.

Health Insurance Reserve — This fund is credited with employee and employer contributions for retirees' health, dental and vision benefits and interest is allocated on the beginning balance. Premiums for health, dental and vision benefits are paid from this fund. At September 30, 1999 and 1998, the balance in this account was \$47.1 million and \$75.6 million respectively.

DC Savings Subaccount — The savings in employer contributions attributable to the transfer to the Defined Contribution are contributed to this subaccount. Interest will also be allocated to this subaccount. The subaccount is restricted because the statute stipulates that the funds cannot be used until health benefits are fully funded. As of September 30, 1999, the balance in the fund was \$170,600, all of which is restricted.

#### **Notes to General Purpose Financial Statements**

#### Fair Value of Investments

Plan investments are reported at fair value, except for short-term investments. Short-term investments are carried at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Corporate bonds not traded on a national or international exchange are based on equivalent values of comparable securities with similar yield and risk. Real estate debt is valued on the basis of future principal and interest payments, and is discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals. Other investments not having an established market are recorded at estimated fair value.

#### Reporting Entity

The System is a pension trust fund of the State of Michigan. As such, the System is considered part of the State and is included in the State's comprehensive annual financial report as a pension trust fund. The System and its board are not financially accountable for any other entities or other organizations. Accordingly, the System is the only entity included in this financial report.

#### **Investment Income**

Dividend income is recognized based on the ex-dividend date and interest income is recognized on the accrual basis as earned. Fair value changes are recorded as investment income or loss. Purchases and sales of investments are recorded as of the trade date (the date upon which the transaction is initiated), except for purchase and sale of mortgages, real estate, and alternative investments which are recorded as of the settlement date (the date upon which the transaction is ultimately completed). The effect of recording such transactions as of the settlement date does not materially affect the financial statements.

#### Property and Equipment

Office space is leased from the State on a year to year basis. Office equipment is capitalized if the value exceeds \$5,000. These assets are recorded at cost and are reported net of depreciation in the Statement of Pension and Postemployment Heathcare Plan Net Assets. Such assets are depreciated on a straight line basis over 10 years. As of September 30, 1998, all capitalized equipment was fully depreciated.

#### Related Party Transactions

Leases and services — The Retirement System leases operating space and purchases certain administrative, data processing, legal and investment services from the State. The space and services are not otherwise available by competitive bid. The following summarizes costs incurred by the System for such services.

	1999	1998
Building rentals	\$ 98,996	\$ 92,941
Technological Support	1,411,364	1,283,725
Legal	328,537	270,300
Investment	1,641,600	1,408,508

Cash — On September 30, 1999 and 1998, the System had \$59 million and \$23 million, respectively in a common cash investment pool maintained for various State operating funds. The participating funds in the common cash pool earn interest at various rates depending upon prevailing short-term interest rates. Earnings from these activities amounted to \$1.01 million and \$2.3 million for the years ended September 30, 1999 and 1998, respectively.

#### **Notes to General Purpose Financial Statements**

#### Reclassification of Prior Year Amounts

Certain prior year amounts have been reclassified or restated to conform with the current year presentation.

#### **NOTE 3 - CONTRIBUTIONS**

Members currently participate in the System on a non-contributory basis. Under certain circumstances, members may contribute to the System for the purchase of creditable service such as military service or maternity leave. Effective August 1, 1998, the retirement act was amended to permit a "universal buy-in". With a universal buy-in, a member may elect to purchase no more than 5 years of service credit (less other service credit purchased). The State is required by Public Act 240 of 1943, as amended, to contribute amounts necessary to finance the benefits of its employees. Contribution provisions are specified by state statute and may be amended only by action of the state legislature.

Periodic employer contributions to the System are determined on an actuarial basis using the entry age normal actuarial cost method. Under this method, the actuarial present value of the projected benefits of each individual included in the actuarial valuation is allocated on a level basis over the service of the individual between entry age and assumed exit age. The portion of this cost allocated to the current valuation year is called the normal cost. The remainder is called the actuarial accrued liability. Normal cost is funded on a current basis. The actuarial accrued liability is amortized over a 37-year period for the 1998-99 fiscal year.

Actual employer contributions paid for retirement benefits for the year were \$121.1 million and \$147.6 million, representing 5.6% and 7.0% of annual covered payroll, for the years ended September 30, 1999, and 1998, respectively. Required employer contributions for pensions included:

- 1. \$161.2 million and \$185.8 million for fiscal years 1999 and 1998, respectively, for normal cost of pensions representing 7.65% and 8.2% (before reconciliation), respectively, of annual covered payroll.
- 2. \$(49.8 million) and (\$59.4 million) for fiscal years 1999 and 1998, respectively, for amortization of (overfunded)/unfunded actuarial accrued liability, representing (2.36%) and (2.62%) (before reconciliation), respectively, of annual covered payroll.

The fund is required to reconcile actuarial requirements annually. Any funding excess or deficiency is included in the subsequent years appropriation request, and is not recognized as a payable or receivable in the accounting records. Based on this reconciliation and other adjustments, the differences are smoothed over 5 years.

#### **NOTE 4 - INVESTMENTS**

#### Investment Authority

Under Public Act 380 of 1965, as amended, the authority for the purchase and the sale of investments resides with the State Treasurer. Investments are made subject to the Michigan Public Pension Investment Act, Public Act 314 of 1965, as amended. The Michigan Public Pension Investment Act authorizes, with certain restrictions, the investment of pension fund assets in stock, corporate and government bonds and notes, mortgages, real estate, and certain short-term and alternative investments. Investments must be made for the exclusive purposes of providing benefits to active members, retired members and beneficiaries, and for defraying the expenses of investing the assets.

Under Public Act 314 of 1965, as amended, the State Treasurer may invest up to 5% of the System's assets in small businesses having more than one-half of assets or employees within Michigan as described in section 20(a) of the act and up to 15% of the System's assets in investments not otherwise qualified under the act as described in section 20(d). Alternative investments include limited partnerships and distributions from these partnerships in the form of bonds, preferred stock, common stock and direct investments.

#### **Notes to General Purpose Financial Statements**

#### **Derivatives**

The State Treasurer does not employ the use of derivatives in the investment of Common Cash or the investment of trust funds other than the pension trust funds.

Derivatives are used in managing pension trust fund portfolios, but uses do not include speculation or leverage of investments. Less than 6% of the total pension trust fund's portfolio has been invested from time to time in future contracts, collateralized mortgages and swap agreements. State investment statues limit total derivative exposure to 15% of a fund's total asset value, and restrict uses to replication of returns and hedging of assets. Swap agreements represent the largest category of derivatives used, and represented 5.6% of market value of total assets on September 30, 1999.

To diversify the pension fund's portfolio into international equities, the State Treasurer has entered into swap agreements with investment grade counterparties which are tied to stock market indices in eighteen foreign countries. The notional amounts of the swap agreements at September 30, 1999 and 1998, were \$477.5 million and \$383.3 million, respectively. Approximately one half of the notional amount is hedged against foreign currency fluctuations. The swap agreements provide that the retirement systems will pay quarterly, over the term of the swap agreements, interest indexed to the three month London InterBank Offer Rate (LIBOR), adjusted for an interest rate spread, on the notional amount stated in the agreements. At the maturity of the swap agreements the pension fund will either receive the increase in the value of the international equity indices from the level of the indices at the inception of the agreements, or pay the decrease in the value of the indices. Swap agreement maturities range from October, 1999 to August, 2002. US domestic LIBOR based floating rate notes were purchased in the open market to correspond with the notional amount of the swap agreements. The State Treasurer maintains custody and control of these notes.

The value of these synthetic equity structures is a combination of the value of the swap agreements and the value of the notes. The current value represents the current value of the notes and the change in value of the underlying indices from the inception of the swap agreements. The current value is used as a representation of the fair value based upon the intention to hold all swap agreements until maturity. Since the inception of the international equity investment program, over \$129.3 million of gains on international equity exposure and excess interest received have been realized. The unrealized gain of \$92.5 million at September 30, 1999 reflects the increase in international stock indices and changes in currency exchange rates.

The respective September 30, 1999 and 1998 values are as follows:

	Notional Value	<b>Current Value</b>
9/30/99 (dollars in millions)	\$477.5	\$573.0
9/30/98 (dollars in millions)	383.3	375.8

In September, 1999, futures contracts on the S & P 500 and S & P MidCap indices were purchased as part of the allocation of funds to the Index Funds as the stock markets corrected. These transactions resulted in the purchase of \$17.7 million exposure to the indices, the designation of short term funds of an equal amount held in combination with the contracts and the placement and maintenance of Treasury bonds as collateral for the futures transactions. A very small gain on the combined synthetic equity position was recognized on September 30. Subsequently, the synthetic equity positions were increased by approximately \$23.9 million in October, 1999, and dedicated commercial paper was purchased to replace short term cash fund balances held in combination with the futures contracts.

#### **Notes to General Purpose Financial Statements**

#### Investments Exceeding 5% of Plan Net Assets

The System did not hold an individual investment (other than US Government securities) that exceeded 5% of net assets available for benefits at September 30, 1999 or 1998.

#### Securities Lending

State statutes do not prohibit the retirement system from participating in securities lending transactions, and the retirement system has, via a Securities Lending Authorization Agreement, authorized the agent bank to lend its securities to broker-dealers and banks pursuant to a form of loan agreement.

During the fiscal year, the agent bank lent, at the direction of the retirement system, the System's securities and received cash (United States and foreign currency), securities issued or guaranteed by the United States government, sovereign debt rated A or better, convertible bonds, and irrevocable bank letters of credit issued by a person other than the borrower or an affiliate of the borrower as collateral. The agent bank did not have the ability to pledge or sell collateral securities delivered absent a borrower default. Borrowers were required to deliver collateral for each loan equal to: (i) at least 102% of the market value of the loaned securities in the case of loaned securities denominated in United States dollars or whose primary trading market was located in the United States or sovereign debt issued by foreign governments or (ii) 105% of the market value of the loaned securities in the case of loaned securities not denominated in United States dollars or whose primary trading market was not located in the United States.

The System did not impose any restrictions during the fiscal year on the amount of the loans the agent bank made on its behalf. There were no failures by any borrowers to return loaned securities or pay distributions thereon during the fiscal year. Moreover, there were no losses during the fiscal year resulting from a default of the borrowers or the agent bank.

During the fiscal year, the System and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested, together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment pool. As of September 30, 1999, such investment pool had an average duration of 64 days and an average weighted maturity of 489 days. Because the loans were terminable at will, their duration did not generally match the duration of the investments made with cash collateral. On September 30, 1999, the System had no credit risk exposure to borrowers. The collateral held and the market value of securities on loan for the retirement system as of September 30, 1999, were \$357,678,792 and \$349,613,441 respectively.

Gross income from security lending for the fiscal year was \$17.3 million. Expenses associated with this income amounted to \$16.0 million for the borrower's rebate and \$328.5 thousand for fees paid to the agent.

#### Categories of Investment Risk

Investments made by the fund, including repurchase agreements and information concerning reverse repurchase agreements, are summarized below. The investments represented by specific identifiable investment securities are classified as to credit risk in three categories.

Category 1 includes investments insured, registered, or held by the System or its agent in the System's name. Category 2 includes uninsured and unregistered investments held by the counterparty's trust department or agent in the System's name. Category 3 includes uninsured and unregistered investments held by the counterparty, its trust department, or agent, but not in the System's name.

At September 30, 1999, all investments of the pension trust fund were classified as Category 1, and Category 3 except for certain investments not categorized.

#### **Notes to General Purpose Financial Statements**

The following table summarizes the investments:

	1999	1998
Category 1		
Prime Commercial Paper	\$ 82,062,984	\$ 238,323,470
Short Term Note	142,841,316	118,776,018
Government Securities	1,201,685,132	983,355,193
Corporate Bonds & Notes	764,027,799	936,961,946
Preferred Stock	213	255,930
Equities	5,194,920,870	4,370,500,542
Real Estate	64,583,917	68,418,133
Alternative Investments	39,742,769	30,398,933
Derivatives (International)	573,013,264	375,821,394
Total Category 1	\$ 8,062,878,264	\$ 7,122,811,559
Category 3		
Government Securities	\$ 5,450,000	\$ 0
		<u> </u>
<b>Total Category 3</b>	\$ 5,450,000	\$ 0
Non-Categorized		
Private Placements	\$ 81,013,268	\$ 98,098,045
Mortgages	5,954,693	34,617,940
Real Estate	722,582,820	689,637,456
Alternative Investments	992,322,376	785,696,724
Cash Collateral	313,580,913	380,746,684
Securities on Loan:		
Government Securities	216,660,918	205,666,662
Corporate Bonds & Notes	6,730,854	18,913,533
Equities	83,115,355	141,381,677
<b>Total Non-Categorized</b>	\$ 2,421,961,197	\$ 2,354,758,721
Grand Total	\$ 10,490,289,461	\$ 9,477,570,280
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In Category 1, the real estate investments are all publicly traded real estate investment trusts. Non-categorized real estate consists of investments through various legal entities.

In Category 1, the alternative investments are publicly traded stocks and bonds. Non-categorized alternative investments consist of limited partnerships and non-publicly traded stocks and bonds.

#### **NOTE 5 - COMMITMENTS AND CONTINGENCIES**

Under the Administrative Procedures Act, members may appeal a decision made by the Board. Once the administrative procedure has been exhausted, the decision may be appealed in Michigan's court system. Various cases that have exhausted the administrative procedures have been appealed in the court system. These cases are in the normal course of business and the System does not anticipate any material loss as a result of the contingent liabilities.

## **Required Supplementary Information**

## Schedule of Funding Progress (Amounts in Millions)

Expressing the net assets available for benefits as a percentage of the actuarial accrued liability provides one indication of State Employees' Retirement System funding status. Analysis of this percentage over time indicates whether the System is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the system. Trends in unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded or overfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the system.

#### Retirement Benefits (\$ in Millions)

Valuation Date Sept 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) <sup>(1)</sup> (b)	Unfunded (Overfunded) Accrued Liability (UAAL) (b-a)	Funded Ratio AAL (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
1990 <sup>@</sup>	4,106	4,464	358	92.0	2,306	15.5
1991 <sup>@</sup>	4,347	4,939	592	88.0	2,315	25.6
1992	4,534	5,480	946	82.7	2,266	41.8
1993+	5,043	6,172	1,129	81.7	2,261	49.9
1994*	5,476	6,560	1,084	83.5	2,351	46.1
1995	6,090	6,861	771	88.8	2,431	31.7
1996	6,678	7,147	469	93.4	2,515	18.6
1997	7,515	8,213	698	91.5	2,273	30.7
1997#	8,834	8,100	(734)	109.1	2,273	(32.3)
1998	9,109	8,374	(735)	108.8	2,108	(34.9)
1998#	9,109	8,497	(612)	107.2	2,108	(29.0)
1999	9,648	9,029	(620)	106.9	2,214	(28.0)

<sup>(1)</sup> Based on entry age normal actuarial method.

<sup>&</sup>lt;sup>®</sup> Benefits amended.

<sup>&</sup>lt;sup>+</sup> Revised asset valuation method.

<sup>#</sup> Revised actuarial assumptions and revised asset valuation method.

Revised actuarial assumptions.

# **Required Supplementary Information** (Continued)

## **Schedule of Employer Contributions**

Fiscal Year Ending Sept. 30	 Annual Required Contribution (ARC)	<u>C</u>	Actual ontribution	Percentage Contributed
1990	\$ 160,367,963	\$	123,964,435	77.3 %
1991	195,590,162		154,125,048	78.8
1992	215,470,500		187,028,394	86.8
1993	219,912,052		246,961,234	112.3
1994	230,231,706		263,845,535	114.6
1995	260,769,716		306,404,416	117.5
1996	262,686,020		286,060,720	108.9
1997	229,502,829		288,590,215	125.7
1998	185,845,073		147,599,551	79.4
1999	161,201,715		121,119,857	75.1

## Financial Section

#### **Notes to Required Supplemental Information**

#### **NOTE A - DESCRIPTION**

Ten year historical trend information designed to provide information about State Employees' Retirement System's progress made in accumulating sufficient assets to pay benefits when due is presented in the preceding schedules. Other ten year historical trend information related to the pension plan is presented in the Statistical and Actuarial Sections of the report. This information is presented to enable the reader to assess the progress made by the System in accumulating sufficient assets to pay pension benefits as they become due.

The comparability of trend information is affected by changes in actuarial assumptions, benefit provisions, actuarial funding methods, accounting policies, and other changes. Those changes usually affect trends in contribution requirements and in ratios that use the pension obligation as a factor.

The Schedule of Funding Progress and Schedule of Employer Contributions are reported as historical trend information. The Schedule of Funding Progress is presented to measure the progress being made to accumulate sufficient assets to pay benefits when due. The Schedule of Employer Contributions is presented to show the responsibility of the Employer in meeting the actuarial requirements to maintain the System on a sound financial basis.

#### NOTE B - SUMMARY OF ACTUARIAL ASSUMPTIONS

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

Valuation Date 09/30/99
Actuarial Cost Method Entry Age Normal
Amortization Method Level Percent of Payroll, Closed

Remaining Amortization Period 37 Years
Asset Valuation Method 5-Year Smoothed Market

Actuarial Assumptions:

Inflation Rate 4%
Investment Rate of Return 8%
Projected Salary Increases 3% - 16%
Cost-of-Living Adjustments 3% Annual Non-Con

3% Annual Non-Compounded with Maximum Annual Increase of \$300 for those Eligible

# **Required Supplementary Information** (Continued)

#### **YEAR 2000**

In October 1998, the Governmental Accounting Standards Board (GASB) issued Technical Bulletin 98-1, entitled *Disclosures about Year 2000 Issues*. The provisions of the GASB technical bulletin, as amended by Technical Bulletin 99-1, require the System to make disclosures about its readiness in addressing year 2000 issues for its computer systems and other electronic equipment.

To address the year 2000 issues, the State established the Year 2000 Project Office within the Department of Management and Budget (DMB). The Year 2000 Project Office's mission is to lead, support, and facilitate achievement of year 2000 compliance throughout the state's executive branch to ensure uninterrupted service to Michigan's citizens. The Year 2000 Project Office is monitoring year 2000 compliance efforts at the various agencies and is providing assistance and assigning resources to accelerate compliance for all mission critical systems and equipment. Additional disclosure regarding the status of statewide systems year 2000 compliance efforts upon which the State Employees' Retirement System is dependent can be found in the State of Michigan's Comprehensive Annual Financial Report.

The System in conjunction with the Year 2000 Project Office, DMB, is subjecting those systems and equipment to the following stages of work to address year 2000 issues:

Awareness stage — Establishing a budget and project plan for dealing with the year 2000 issue.

Assessment stage — Identifying the systems and components for year 2000 compliance.

Remediation stage — Making changes to systems and equipment.

Validation/testing stage — Validating and testing the changes that were made during the remediation stage.

MSERS has identified the computer systems and electronic equipment that are critical to its operations, and the following is a summary of progress towards achieving year 2000 compliance:

#### Internal Systems:

Common Pension Payroll and TRKSERS -- The System has completed the assessment, remediation, validation and testing stages of these systems.

#### External Factors:

There can be no assurance that organizations and governmental agencies with which the System interacts, including banks, vendors, customers, state and federal governments will be year 2000 compliant. With regard to these external organizations, the System obtained assurances that their systems will be ready for the year 2000. If issues are identified, action plans will be instituted as necessary. However, even if the systems of both are compliant in a timely manner, problems could arise with communications between systems if compliance is achieved through inconsistent approaches or methodologies.

Because of the unprecedented nature of the year 2000 issue, its effects and the success of related remediation efforts will not be fully determinable until the year 2000 and thereafter. Management believes that it has instituted a plan to minimize the impact that the year 2000 issue may have on critical operations.

## **Supporting Schedules**

#### Comparative Summary Schedule of Pension Plan Administrative Expenses for the Years Ended September 30, 1999 and 1998

	<u>1999</u>	1998
Personnel Service:		
Staff salaries	\$1,152,512	\$ 1,246,606
Retirement and social security	199,764	178,908
Other fringe benefits	160,477	132,633
Total	1,512,753	1,558,147
Professional Services:		
Actuarial	57,758	138,202
Attorney General	328,537	270,300
Audit	28,637	39,194
Consulting	20,873	4,784
Medical	272,273	123,107
Total	708,078	575,587
Building and Equipment:		
Building Rentals	98,996	92,941
Equipment Purchase, Maintenance and Rentals	60,718	190,991
Depreciation		586
Total	159,714	284,518
Miscellaneous:		
Travel and Board Meetings	11,882	9,616
Office Supplies	48,618	68,114
Postage, Telephone and Other	433,350	479,378
Printing	44,865	38,007
Technological Support	1,411,363	1,283,725
Total	1,950,078	1,878,840
<b>Total Administrative Expenses</b>	\$4,330,623	\$ 4,297,092

## **Supporting Schedules (Continued)**

## **Schedule of Investment Expenses**

	1999	1998
Real Estate Securities Lending Expense Other	\$ 1,163,465 16,330,884 9,687,920	\$ 646,133 16,053,905 6,308,082
<b>Total Investment Expenses</b>	\$ 27,182,269	\$ 23,008,120

#### Schedule of Payments to Consultants

	_	1999	 1998
Independent Auditors Legal Actuary	\$	28,637 328,537 57,758	\$ 39,194 270,300 138,202
<b>Total Payments</b>	\$	414,932	\$ 447,696

## **Supporting Schedules (continued)**

Detail of Changes in Plan Net Assets (Pension and Postemployment Healthcare Benefits)

	For Year Ended September 30, 1999						
	Employee	Pens ion	Employer		Health	TF.4.	
	Savings	Reserve	Ac cumul ation	Income	Insurances	Total	
Add tions:  Members contributions:  Other  Military	\$ 5,112,467 1,073,551				\$ 4,861,628	\$ 9,974,095 1,073,551	
Employer contributions DC Savings Investment income:			\$ 121,119,857		144,515,776 170,600	265,635,633 170,600	
Investment in come Securities lending in come Real estate operating expenses Securities lending expenses Other investment expenses Interest in come				\$ 1,475,060,958 17,317,384 (1,163,465) (16,330,884) (9,687,920)	6,048,620	1,475,060,958 17,317,384 (1,163,465) (16,330,884) (9,687,920) 6,048,620	
Miscellaneous income				159		159	
Total additions	6,186,018		121,119,857	1,465,196,232	155,596,624	1,748,098,731	
Deductions: Retirement allowances		\$ 446,219,254				446,219,254	
Employer share of health insurance Employer share of					169,003,923	169,003,923	
dental vision insurance Refunds of member contributions Transfers to other systems Administrative	21,068 57,263		649,993	4330,623	15,123,552	15,123,552 21,110 707,256 4330,623	
Total deductions	78,331	446219,254	649,993	4330,665	184,127,475	635,405,718	
Net Increase (Decrease)	6,107,687	(446,219,254)	120,469,864	1,460,865,567	(28,530,851)	1,112,693,013	
Other Changes in Net Assets: Interest allocation Transfers upon retirements	1,148,261 (4,295,638)	339,045,681 4,295,638	238,434,887	(578,628,829)			
Transfers of inactive balances Transfers of employer shares	(86)	245,827,381	(245,827,381)	86			
Total other changes in net assets	(3,147,463)	589,168,700	(7,392,494)	(578,628,743)			
Net Increase (Decrease) After Other Changes	2,960,224	142,949,446	113,077,370	882,236,824	(28,530,851)	1,112,693,013	
Net Assets Heldin Trust for Pension and Healthcare Benefi	ts:						
Beginning of Year	2,092,470	4,238,071,009	2,980,436,089	1,863,057,174	75,607,748	9,159,264,490	
End of Year	\$ 5,052,694	\$ 4,381,020,455	\$ 3,093,513,459	\$ 2,745,293,998	\$ 47,076,897	\$ 10,271,957,503	

## **Supporting Schedules (continued)**

Detail of Changes in Plan Net Assets (Pension and Postemployment Healthcare Benefits)

	For Year Ended Sentember 30, 1998											
	1 -7		Pension Employer					Heal th				
•	Savings	—		Reserve	A	ccumulation_		Income	<u>I</u> r	is urances	_	Total
Add tions :												
Members contributions:												
Other	\$ 3,735,4	68							\$	4,619,101	\$	8,354,569
Military	1,423,2	76										1,423,276
Employer contribut ions DC Savings					\$	147,599,551				112,199,628		259,799,179
Investment income:												
Investment income							\$	708,481,812				708,481,812
Securities lending income								16,584,243				16,584,243
Real estate operating expenses								(646,133)				(646,133)
Securities lending expenses								(16,053,905)				(16,053,905)
Other investment expenses								(6,308,082)		0.000 @2		(6,308,082)
Interest Income								201		8,998,673		8,998,673
Miscellaneous income		—						381	_			381
Total additions	5,158,7	44_				147,599,551		702,058,316	_	125,817,402		980,634,013
Deductions:												
Retirement allowances			\$	429,879,875								429,879,875
Employer share of health insurance Employer share										148,458,180		148,458,180
of dental/vision in surance										15,115,875		15,115,875
Refunds of member contributions	18,0	03						552				18,555
Trans fers to other systems	3,025,2	80				131,490,000						134,515,208
Administrative								4,297,092				4,297,092
Total deductions	3,043,2	11		429,879,875		131,490,000		4,297,644		163,574,055		732,284,785
Net Increase (Decrease)	2,115,5	33		(429,879,875)		16,109,551		697,760,672		(37,756,653)		248,349,228
Other Changes in Net Assets:												
Interest allocation	1,234,2	40		356,673,025		318,156,315		(676,063,580)				
Transfers upon retirements	(4,539,0			4,539,047								
Transfers of inactive balances		49)						149				
Transfers of employers hares		_		1,054,676,296		(1,054,676,296)						
Total other changes in net as sets	(3,304,9	56)		1,415,888,368		(736,519,981)		(676,063,431)				
Net Increase (Decrease)												
After Other Changes	(1,189,4	23)		986,008,493		(720,410,430)		21,697,241		(37,756,653)		248,349,228
Aiti Outi Changes	(1,10),			, 00,000, 00		(/20,110,100)		21,00 1,2 11		(51,750,555)		210,00,20
Net Assets Held in Trust for Pension and Heal thcare Benefits	s:											
Beginning of Year	3,281,8	93		3,252,062,516		3,700,846,519		1,841,359,933		113,364,401		8,910,915,262
End of Year	\$ 2,092,4	70	\$	4,238,071,009	\$	2,980,436,089	\$	1,863,057,174	\$	75,607,748	\$	9,159,264,490

## INVESTMENT SECTION

## **INVESTMENT SECTION**

Report on Investment Activity
Asset Allocation
Investment Results
List of Largest Stock Holdings
List of Largest Bond Holdings
Schedule of Investment Fees
Schedule of Commissions
Investment Summary

#### **Report on Investment Activity**

#### INTRODUCTION

The State Treasurer reports quarterly the investment activity to the Investment Advisory Committee which reviews the investments, goals and objectives of the retirement funds and may submit recommendations regarding them to the State Treasurer. The Investment Advisory Committee may also, by a majority vote, direct the State Treasurer to dispose of any holdings which, in the committee's judgement, are not suitable for the funds involved, and may, by unanimous vote, direct the State Treasurer to make specific investments.

The Investment Advisory Committee was created by Act 380 of the Public Acts of 1965. The three public members of the five-member committee are appointed by the Governor with the advice and consent of the Senate for three-year terms. The Director of the Department of Consumer and Industry Services and the Director of the Department of Management and Budget are ex-officio members. The members of the committee are as follows: Mr. Samuel Valenti III (public member), Farris W. Womack (public member), Jerry L. Tubergen, CPA (public member), Kathleen M. Wilbur (ex-officio member), and Janet E. Phipps (ex-officio member). The public members serve without pay, but are paid actual and necessary travel and other expenses.

#### **INVESTMENT POLICY & GOAL**

The primary function of the System is to provide retirement, survivor and disability benefits to its members. The State Treasurer is the sole investment fiduciary and custodian of the System's investment pursuant to state law. The primary investment objective is to maximize the rate of return on the total investment portfolio, consistent with a high degree of prudence and sufficient diversity to eliminate inordinate risks and to meet the actuarial assumption for the investment rate of return, at a reasonable cost achieved by cultivating a motivated team of dedicated professionals. The goals of the fund are:

- 1. To outperform the actuarial assumption over the long-term.
- 2. To produce competitive results at a low cost.
- 3. To achieve a delicate balance between risk and return.
- 4. To perform in the top half of the Capital Resource Advisors public plan universe.
- 5. To exceed individual asset class benchmarks over the long-term.

The strategy for achieving these goals is carried out by investing the assets of the system according to a five-year asset allocation model which currently has seven different asset classes which provides for a well diversified portfolio.

## Asset Allocation (Excludes Collateral on Loaned Securities)

Investment Category	As of 9/30/99 Actual %	Target %
Mortgages	0.1%	0.0%
International Equities Passive	5.7%	12.5%
Real Estate	7.7%	8.5%
Alternative Investments	10.1%	12.5%
Short Term Investments	2.7%	2.5%
Fixed Income	22.2%	20.0%
Domestic Equity	51.5%	44.0%
TOTAL	100.0%	100.0%

### **Report on Investment Activity**

#### STATE LAW

Pursuant to State Law (Section 91 of Act No. 380 of the Public Acts of 1965, as amended), the State Treasurer, State of Michigan, is the investment fiduciary for the following four State sponsored retirement systems: Michigan Public School Employees' Retirement System; Michigan State Employees' Retirement System; Michigan State Police Retirement System; and Michigan Judges' Retirement System.

Act No. 314 of the Public Act of 1965, as amended, authorizes the investment of assets of public employee retirement systems or plans created and established by the state or any political subdivision.

#### PROXY VOTING POLICY

The System's Proxy Voting Policy sets forth directives on the following issues: Board of Directors, Corporate Governance, Social Issues, corporate restructurings and defenses. All proxies are reviewed and voted in accordance with the above mentioned items.

#### INVESTMENT RESULTS

#### Total Portfolio Result

For the fiscal year ended September 30, 1999, the total portfolio returned 16.3%, compared to the median of 15.4% of state plans, including the System, as compiled by Capital Resource Advisors. For the three-year period the fund returned 15.7%, and for the five-year period the fund returned 15.8%. This compares with the median fund return of 14.9% for the three-year period and 15.5% for the five-year period.

During the fiscal year ending September 30, 1999, the nation's economy was characterized by full employment, low inflation, rising interest rates, and moderate economic growth. The equity markets experienced exceptional returns over the time period as the S&P 500 increased 27.8% with the Dow Jones Industrial Average ahead 34.1% The technology portion of the S&P 500 paced the market with a 73.3% increase followed by the capital goods sector which increased 42.0% and the utility sector which appreciated 24.0%. The Federal Reserve increased the Federal Funds rate by 1/4% to 5.0% in June and boosted rates an additional 1/4% to 5.25% in August. As a result of these tightening moves, the yield on the 30 year Treasury increased from 5.0% at September 30, 1998 to 6.0% at September 30, 1999. Because of the rise in interest rates, Lehman Brothers Government/Corporate Index experienced a negative return of 1.6% for the year ending September 30, 1999.

The returns were calculated using a time weighted rate of return in accordance with standards of the Association for Investment Management and Research (AIMR), unless a modification is described in the discussion of the return.

The System is well diversified among asset classes. As of September 30, 1999, the portfolio consisted of 51.5% domestic equities, 22.3% fixed income (includes 0.1% in mortgages), 10.1% alternative investments, 7.7% real estate, 2.7% short-term investments, and 5.7% international securities.

#### Domestic Stocks - Active

The objective of actively-managed domestic stock investments is long-term capital appreciation by investing in publicly-traded stocks of primarily US-based companies.

Equity markets again experienced considerable volatility in fiscal year 1999 as economic conditions mirrored those of fiscal year 1998. The Federal Reserve moved to alleviate global economic difficulties by lowering rates three times in the quarter

### **Report on Investment Activity**

ending December 1998, sending equity markets rebounding from their earlier declines. Corporate earnings growth accelerated throughout the year and major foreign economies strengthened, sending equity markets to record highs by July. Later in the year, fears of inflation arose as commodity prices recovered from the previous year's lows and the US unemployment rate continued to inch lower. Combined with a strong economy, this caused the Federal Reserve to reverse two of its previous actions and equity markets to retreat from their record highs.

The actively-managed domestic stock portfolio achieved a total rate of return of 23.3% for the fiscal year, compared with 27.8% for the S&P 500 Index and 34.1% for the Dow Jones Industrial Average. This compared with a median return of 24.2% for the state plans, including the System, as compiled by Capital Resource Advisors. The markets were led by a 73.3% gain for technology stocks, followed by 42.0% for capital goods and 24.0% for utilities. Three-year and five-year annualized returns for the actively-managed domestic stock portfolio were 21.1% and 21.2%, respectively. This compares with 25.1% and 25.0% for the S&P 500, and 21.4% and 21.9% for the median of state plans.

At the close of fiscal year 1999, actively-managed domestic stocks represented 37.5% of total System investments, compared with 37.5% at the end of fiscal year 1998, and 36.4% at the close of fiscal year 1997.

### Domestic Stocks - Passive

The objective of the enhanced S&P 500 and S&P MidCap Index Funds is to closely match the return performance of their benchmarks, use low risk strategies to offset transaction costs and add to performance when possible. The S&P 500 Index Fund return for the fiscal year was 27.9% versus the benchmark's 27.8%. The S&P MidCap Index Fund return for the fiscal year was 26.8% versus its benchmark's 25.5%. The enhancements to the returns were the result of strategic allocations of additional funds to passive equity investments during market corrections and the opportunistic use of derivative programs. During fiscal year 1999, \$94 million was added to these index funds. At the end of the fiscal year, the passive domestic stock portfolios represented 14.0% of total assets, the S&P 500 Index Fund accounting for 13.1% and the S&P MidCap Index Fund accounting for 0.8%. Totals include both index fund portfolios of stocks and related synthetic equity positions, a combination of futures contracts and fixed income securities. Indexed stock portfolios represented 12.1% of total investment assets at the end of the prior fiscal year.

#### International Equities - Passive

The objective of the passive international equity portfolio is to match the return performance of the Net Salomon Broad Market Index (BMI) Europe and Pacific Composite (EPAC) adjusted for net dividends. Fifty percent of the benchmark is hedged to the U.S. dollar and the other half is affected by foreign currency exchange rate changes. The total passive international return of 31.7% in the fiscal year compared favorably with the Net Salomon BMI-EPAC return of a 31.4%. The passive international return of 14.0% for three years compared well with the benchmark's return of 12.1% over the same period.

Core passive exposure to international equity returns is achieved by investing in a combination of fixed income notes and equity swap agreements on foreign stock indices in developed markets. Interest on the dedicated notes is exchanged for international stock returns, and the total notional amount of the swap agreements is invested in the approximate proportions of the Net Salomon Broad Market Index (BMI) Europe and Pacific Composite (EPAC) country weightings in those country indices. Use of swap agreements for a core position began in 1993 and an ADR and index-related security portfolio was added in June of 1999 to increase management flexibility. During fiscal year 1999, \$98.7 million of exposure was added, raising passive international investments to 5.7% of total investment assets.

The combination of fixed income LIBOR notes and equity swap agreements was valued at \$573.0 million on September 30, 1999. That valuation included a net unrealized gain of \$92.6 million on equity index exposures and an unrealized loss of \$0.5 million on LIBOR note investments held. During fiscal year 1999, \$15.9 million of gains on equity exposures were realized, and \$4.3 million of interest in excess of obligations on completed swaps was also recognized. At the end of the fiscal year, total realized gains and net interest received in excess of counter party obligations on completed agreements reached a record \$129.3 million since the program began.

### **Report on Investment Activity**

#### Fixed Income

For the fiscal year ending September 30, 1999, the fixed income portfolio returned 0.4% compared to median of negative 0.2% for the state plans, including the System, as compiled by Capital Resource Advisors. The fixed income portfolio returned 6.9% for the three year period and 8.4% for the five-year period. These returns compare with the median portfolio returns of 6.9% for the three year and 8.2% for the five-year period.

During the year, rates increased steadily and spreads narrowed. Fixed income markets rewarded shorter duration portfolios. The System's fixed income portfolio was shorter than the Lehman Brothers Government Index. Consequently, the fund outperformed the Lehman Index for the one-year period, 0.4% compared to a negative 1.6%, the three-year period, 6.9% versus 6.8% and outperformed the index for the five-year period, 8.4% versus 7.8%. Relative to the Salomon Smith Barney Broad Investment Grade Bond Index, the System outperformed the one-year time horizon, 0.4% to a negative 0.3%, the three year period, 6.9% to 6.8%, and was ahead in the five-year period 8.4% to 7.9%.

Fixed Income represented 22% of the total portfolio compared with 25% last year. The corporate sector represented 37% of fixed income securities with government securities accounting for 63%. Last year, corporate securities were 47% of the fixed income securities with government securities representing 53%. The increased level of government securities was the result of quality spreads narrowing.

#### Real Estate Equity

As of the fiscal year ending September 30, 1999, 7.7% of the total investment portfolio was invested in equity real estate. This compares to 8.3% and 6.4% for the fiscal years ending September 30, 1998 and 1997, respectively. The target asset allocation for equity real estate investment is 8.5%.

The one-year, three-year and five-year total equity real estate net returns for the fiscal year ending September 30, 1999, were 13.2%, 12.9% and 11.5%, respectively, as compiled by Capital Resource Advisors. This compares to the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index returns of 11.9%, 13.7% and 11.6% relating to the same time periods. As of September 30, 1999, the NCREIF portfolio of properties is heavily weighted in the office sector at 43% versus the System's portfolio at 25%. The historical volatility of the office sector returns makes it a more risky property type. The NCREIF Index returns are quoted on an unleveraged basis and before deducting fees/overhead, while the System's returns quoted above are leveraged after fees/overhead.

The real estate investments are broadly diversified geographically, across the country, by type of property, and by class of property, to reduce risk. Major property types as of September 30, 1999, included: apartments 37%, retail centers, including regional malls and neighborhood/community shopping centers 30%, commercial office buildings 25%, and miscellaneous other property types such as: industrial, self storage, and hotel 8%. The System through its advisors controls, acquires, develops, redevelops and disposes of real estate with the goal of maximizing returns while maintaining an *acceptable* level of risk. The properties are held in various investment vehicles: Partnerships, LLC's, Trusts, Commingled funds, and REIT stock. These legal entities allow the System to enjoy the benefits of real estate ownership while limiting the liability associated with this asset class. In all new investments, the System retains approval rights over critical decisions in order to further mitigate risk. The properties are regularly valued by independent appraisers to establish market values.

### Mortgages

As of the fiscal year ending September 30, 1999, less than 0.5% of the total portfolio was invested in direct mortgages. The asset allocation objective is to reduce mortgage holdings to 0% over time; a majority of the mortgage portfolio has been sold during the previous two years to take advantage of the favorable low interest rate environment.

### **Report on Investment Activity**

The one-year, three-year and five-year total returns for the mortgage portfolio, for the fiscal year ending September 30, 1999, were a negative 9.1%, a positive 2.2% and 5.1% respectively.

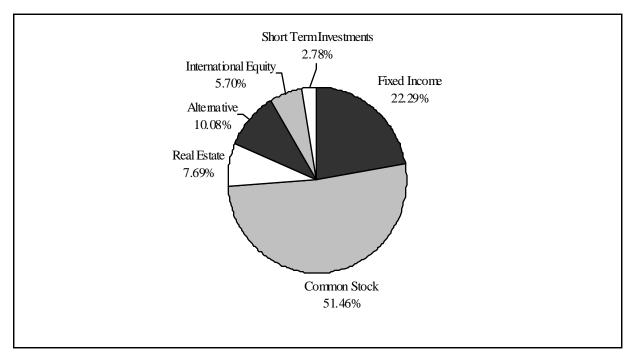
#### Alternative Investments

Alternative Investments are investments in the private equity market, either directly in companies or indirectly through limited partnerships. Through September 30, 1999, approximately 92% of alternative investments were made through limited partnerships. Of the investments in limited partnerships, approximately 10% were in partnerships investing internationally. The remaining 8% were direct private equity investments and public stock distributions received from the limited partnerships. The percentage of investment assets in alternative investments has consistently increased from 4.8% as of September 30, 1993, to 10.1% as of September 30, 1999. The asset allocation for alternative investments is 10.1% while the long-term target asset allocation is 12.5%. The System operates within a five year range of 10% - 15%.

The one-year, three-year and five-year total alternative investment returns for the fiscal year ending September 30, were 11.8%, 18.1% and 20.7%, respectively. Based on returns for quarters ending June 30 and September 30, 1999, of 6.45% and 7.10% respectively, the alternative investment portfolio is experiencing an annualized rate of return of 27.1%.

### **Report on Investment Activity**

### **Asset Allocation**



Investment Results Periods Ending September 30, 1999

		Annualized Rate of Return			
Investment Category	Current Year	3 Years	5 Years	10 Years	
Total Portfolio	16.3 %	15.7 %	15.8 %	11.4 %	
Me dia n	15.4	14.9	15.5	11.5	
Domestic Equities Stock - Active	23.3	21.1	21.2	13.9	
Domestic Equities Stock - Passive*	27.9	24.7	24.8	17.3	
Standard & Poor's (S&P500)	27.8	25.1	25.0	16.8	
Me dian of State Plans (Domestic Equities - Active)	24.2	21.4	21.9	14.8	
Standard & Poor's (MidCap)	25.5	17.8	18.6	15.6	
International Equities - Pass ive	31.7	14.0	12.7	N/A	
Net Salomon BMI - EPAC 50/50	31.4	12.1	10.7	N/A	
Fixed Income Bonds (U.S. Corp and Govt)	0.4	6.9	8.4	8.6	
Salomon Smith Barney Broad Investment Grade Bond Index	(0.3)	6.8	7.9	8.2	
Lehman Brothers Government/Corporate	(1.6)	6.8	7.8	8.1	
Me dian of State Plans	(0.2)	6.9	8.2	8.5	
Real Estate - Debt	(9.1)	2.2	5.1	7.1	
Salomon Smith Barney Broad Investment Grade Bond Index	(0.3)	6.8	7.9	8.2	
Real Estate - Equity	13.2	12.9	11.5	5.0	
NCREIF	11.9	13.7	11.6	5.6	
Alternative Investments	11.8	18.1	20.7	16.4	

<sup>\*</sup> Passive portfolio consists of a S&P 500 fund and a S&P Midcap fund. The return is a weighted average of the two funds.

### **Report on Investment Activity**

# Largest Assets Held

### Largest Stock Holdings (By Market Value) September 30, 1999

Rank	Shares	Stocks	Market Value
1	2,885,952	Microsoft Corporation	\$ 261,359,028
2	1,854,519	General Electric Corporation	219,876,409
3	3,423,109	Pfizer Incorporated	122,804,035
4	2,545,160	Wal-Mart Stores Incorporated	121,054,173
5	1,749,481	Cisco Systems Incorporated	119,948,791
6	2,706,105	Citigroup Incorporated	119,068,620
7	1,034,680	BP Amoco PLC	114,655,478
8	1,701,774	Warner-Lambert Company	112,955,249
9	2,337,062	McDonald's Corporation	101,077,932
10	1,208,124	Intel Corporation	89,778,715

### Largest Bond Holdings (By Market Value) September 30, 1999

Rank	Par Amount	Amount Bonds & Notes		arket Value
1	\$ 85,815,000	US Treasury Bonds at 9.125% Due 5-15-2009	\$	95,898,263
2	59,950,000	US Treasury 0% Coupon Strips Due 8-15-2003		47,818,518
3	69,781,800	US Treasury 0% Callable Principal Due 5-15-2011		46,813,121
4	43,400,000	Ford Motor Credit Corp FRN 5.63% Due 10-9-2001		43,421,700
5	34,880,000	Bankers Trust Corp FRN 5.59% Due 3-16-2001		34,912,787
6	49,486,000	US Treasury 0% Coupon Strips Due 11-15-2011		32,195,592
7	32,700,000	FHLMC Debenture 6.70 % Due 7-23-2008		31,606,594
8	26,667,310	Chemical Bank FRN 5.3545% Due 7-29-2003		26,835,507
9	26,395,925	First Chicago Corp FRN 5.43625% Due 7-28-2003		26,349,341
10	34,777,000	US Treasury Tiger 0% Coupon Due 8-15-2004		25,741,588

A complete list of stock and bond holdings is available from the Michigan Department of Treasury.

### **Report on Investment Activity**

### **Schedule of Investment Fees**

The State Treasurer is the investment fiduciary and custodian of the retirement system's funds pursuant to state law. Outside advisors are utilized to augment the State Treasurer's internal staff in the real estate and alternative investment markets. Only 9.7% of the total investment portfolio is managed by fully discretionary outside advisors. Outside advisors' fees are netted against the partnership or trust fund income. The Michigan Department of Treasury's cost of operations applicable to the retirement system for the fiscal year amounted to \$1,641.6 thousand or less than two basis points (.02%) of the market value of the portfolio.

State law created an Investment Advisory Committee comprised of the directors of the Department of Consumer and Industry Services and Management and Budget, or their duly authorized representatives, and three public members appointed by the Governor with the advice and consent of the Senate. The public members serve without pay, but are paid actual and necessary travel and other expenses. The committee meets quarterly to review investments, goals and objectives and may submit recommendations to the State Treasurer. The committee may also, by a majority vote, direct the State Treasurer to dispose of any holding which in the committee's judgement is not suitable for the fund involved, and may by unanimous vote direct the State Treasurer to make specific investments.

#### **Schedule of Investment Fees**

#### Investment Managers' Fees:

	N	Ass et under Manag ement n thousands)	(in t	Fees housands)	Basis Points*	
State Treas urer	\$	9,250,796.6	\$	1,641.6	1.8	
Outside Advisors - Alternative		949,710.2		7,998.7	84.2	
RealEstate		35,867.4		-	-	
Total	\$	10,236,374.2				

#### Other Investment Services Fees:

	 Assets in Custody**	<u>(in</u> 1	Fees thousands)
Custody & Research Fees	\$ 8,007,727.4	\$	47.6
Security Lending Fees	349,613.4		16,330.9

<sup>\*</sup> Outside Advisors Fees are netted against the income of the partnership and trust income. The partnership agreements define the management fees, which range from 150 to 250 basis points of the committed capital, in most cases the fees are netted against income. For Real Estate the asset management fees normally range from 25 to 90 basis points and are netted against current year's income.

<sup>\*\*</sup> Other investment service fees are charged on assets managed by the State Treasurer at its custodial bank in the amount of \$8,007,727.4 thousand; \$349,613.4 thousand of assets were on loan at fiscal year end.

### **Report on Investment Activity**

# **Schedule of Investment Commissions**

	Fis cal Year Ended 9-30-99				
		mmissions	Number of	Average Commission	
		Paid <sup>(1)</sup>	Shares Traded	Rate Per Share	
Investment Brokerage Firms:					
Paine Webber, Inc.	\$	156,784	2,635,103	0.06	
Merrill Lynch & Co.		136,409	2,361,429	0.06	
Goldman, Sachs & Co.		119,863	2,103,161	0.06	
Morg an Stanley Dean Witter & Co.		100,951	1,682,510	0.06	
CS First Boston Corporation		100,593	1,690,256	0.06	
Salomon Smith Barney, Inc.		89,156	1,554,630	0.06	
Donalds on, Lufkin & Jenrette Securities Corp.		80,773	1,354,425	0.06	
Schroder & Co., Inc.		69,279	1,154,841	0.06	
Pru dential Securities, Inc.		66,583	1,129,601	0.06	
Lehman Brothers, Inc.		62,721	1,077,917	0.06	
Brid ge Trading Company		61,693	1,028,211	0.06	
Sanford C. Bernstein & Co.		61,542	1,025,694	0.06	
Bear, Stearns & Co.		48,260	818,225	0.06	
Capital Institutional Services, Inc.		48,239	803,985	0.06	
Oppenheimer & Company		47,129	786,218	0.06	
J.P. Morgan Securities, Inc.		45,534	776,990	0.06	
SG Cowen & Company		45,385	766,063	0.06	
Standard & Poor's Securities, Inc.		39,159	652,649	0.06	
Charles Schwab & Co., Inc.		31,411	523,513	0.06	
Everen Securities, Inc.		23,209	386,824	0.06	
Deutsche Bank Securities		17,047	284,118	0.06	
Bank of America Securities		14,964	262,524	0.06	
Wilshire Associates		13,631	227,177	0.06	
BancBoston Robertson Stephens		8,036	216,788	0.04	
The Citation Group		7,487	124,775	0.06	
Subtotal (25 highest)	\$	1,495,838	25,427,627	0.06	
All Other Brokerage Firms		94,599	1,659,352	0.06	
Total	_\$	1,590,437	27,086,979	0.06	

<sup>(1)</sup> These amounts are included in purchase and sale prices of investments.

The average commission rate per share for the top 25 brokerage firms.

The average commission rate per share for all other brokerage firms, excluding the top 25 brokerage firms.

<sup>(4)</sup> The average commission rate per share for all brokerage firms.

### **Investment Summary**

	Fiscal Year F	nded 9-30-99		Fiscal Year Foded 9-30-98			
Market Value <sup>(a)</sup>	Percent of Total Market Value	In vestment & In te rest Income (c)	Percent of In vestment & Interest Income	Market Value (a)	Percent of Total  Market Value	In vestment & In te rest Income (c)	Percent of In vestment & Interest Income
\$ 1,423,796,050	13.91%	\$ (2,541,915)	(0.17%)	\$ 1,189,021,855	13.04%	\$ 124,852,142	17.40%
851,772,134	832%	7,528,232	051%	1,054,229,454	11.56%	92,789,545	12.93%
5,954,693	0.06%	1,438,796	0.10%	34,617,940	038%	3,748,924	0.52%
2,281,522,877	22.29%	6,425,113	0.44%	2,277,869,249	24.98%	221,390,611	30.85%
5,268,007,261	51.46%	1,090,152,636	73.60%	4,511,882,219	49.47%	252,643,049	35.22%
787,166,737	7.69%	89,311,006	6.03%	758,055,589	831%	64,615,594	9.01%
1,032,065,145	10.08%	140,880,055	951%	816,095,657	8.95%	154,131,086	21.48%
583,042,228	5.70%	134,118,497	9.05%	375,821,394	4.12%	(28,204,064)	(3.93%)
284,569,989	2.78%	20,222,271	137%	379,867,669	4.17%	52,904,209	737%
\$ 10,236,374,237	100.00%	\$ 1,481,109,578	100.00%	\$ 9,119,591,777	100.00%	\$ 717,480,485	100.00%
	851,772,134 5,954,693 2,281,522,877 5,268,007,261 787,166,737 1,032,065,145 583,042,228 284,569,989	Market Value         Percent of Total Market Value           \$ 1,423,796,050         13.91%           \$ 51,772,134         8.32%           5,954,693         0.06%           2,281,522,877         22.29%           5,268,007,261         51.46%           787,166,737         7.69%           1,032,065,145         10.08%           583,042,228         5.70%           284,569,989         2.78%	Market Value         Market Value         Interest Income (e)           \$ 1,423,796,050         13.91%         \$ (2,541,915)           851,772,134         832%         7,528,232           5,954,693         0.06%         1,438,796           2,281,522,877         22.29%         6,425,113           5,268,007,261         51.46%         1,090,152,636           787,166,737         7.69%         89,311,006           1,032,065,145         10.08%         140,880,055           583,042,228         5.70%         134,118,497           284,569,989         2.78%         20,222,271	Market Value         Percent of Total Market Value         Investment & Investmen	Market Value         Percent of Total Market Value         In westment & In the rest Income         Percent of In westment & In the Interest Income         Percent of In westment & Interest Income         Market Value           \$ 1,423,796,050         13.91%         \$ (2,541,915)         (0.17%)         \$ 1,189,021,855           851,772,134         8.32%         7,528,232         0.51%         1,054,229,454           5.954,693         0.06%         1,438,796         0.10%         34,617,940           2.281,522,877         22.29%         6,425,113         0.44%         2,277,869,249           5.268,007,261         51.46%         1,090,152,636         73.60%         4,511,882,219           787,166,737         7.69%         89,311,006         60.3%         758,055,589           1,032,065,145         10.08%         140,880,055         951%         816,095,657           583,042,228         5.70%         134,118,497         9.05%         375,821,394           284,569,989         2.78%         20,222,271         1.37%         379,867,669	Market Value         Percent of Total Market Value         In vestment & Interest Income         Percent of Investment & Interest Income         Percent of Total Market Value         Percent of Total Market Value           \$ 1,423,796,050         13.91%         \$ (2,541,915)         (0.17%)         \$ 1,189,021,855         13.04%           \$ 51,772,134         8.32%         7,528,232         0.51%         1,054,229,454         11.50%           \$ 5,954,693         0.06%         1,438,796         0.10%         34,617,940         0.38%           2,281,522,877         22.29%         6,425,113         0.44%         2,277,869,249         24.98%           5,268,007,261         51.46%         1,090,152,636         73.60%         4,511,882,219         49.47%           787,166,737         7.69%         89,311,006         60.3%         758,055,589         8.31%           1,032,065,145         10.08%         140,880,055         951%         816,095,657         8.95%           583,042,228         5.70%         134,118,497         9.05%         375,821,394         4.12%           284,569,989         2.78%         20,222,271         1.37%         379,867,669         4.17%	Market Value         Percent of Total Market Value         In vestment & Investment & Investment & Interest Income         Market Value         Percent of Total Market Value         Investment & Investment & Investment & Interest Income           \$ 1,423,796,050         13.91%         \$ (2,541,915)         (0.17%)         \$ 1,189,021,855         13.04%         \$ 124,852,142           \$ 51,772,134         8.32%         7,528,232         0.51%         1,054,229,454         11.56%         92,789,545           \$ 954,693         0.06%         1,438,796         0.10%         34,617,940         0.38%         3,748,924           2,281,522,877         22.29%         6,425,113         0,44%         2,277,869,249         24.98%         221,390,611           \$ 5,268,007,261         \$ 1,46%         1,090,152,636         73.60%         4,511,882,219         49.47%         252,643,049           \$ 787,166,737         7,69%         89,311,006         60.3%         758,055,589         83.1%         64,615,594           \$ 1,032,065,145         10.08%         140,880,055         951%         816,095,657         8.95%         154,131,086           \$ 583,042,228         \$ 5,70%         134,118,497         90.5%         375,821,394         4.12%         (28,204,064)           \$ 284,569,989         \$ 2,78%

<sup>(</sup>a) Short Term Investment's are at cost, which approximates market.

<sup>(</sup>b) Includes equity in the State Treasurer's Common Cash Fund. Market Values for short term excludes the amounts payable and receivable for sales and purchases of securities with a set tlement date after September 30 for each fiscal year. The amount also excludes \$313,580,913 and \$380,746,684 in cash collateral for security lending for fiscal year 1999 and 1998 respectively.

 $<sup>^{(</sup>c)}$  Total Investment & Income excludes net security lending income of \$986,501 and \$530,338 for fiscal year 1999 and 1998 respectively.

Actuary's Certification
Summary of Actuarial Assumptions and Methods
Schedule of Active Member Valuation Data
Schedule of Changes in Retirement Rolls
Prioritized Solvency Test
Summary of Plan Provisions

### **Actuary's Certification**

#### THE SEGAL COMPANY

One Park Avenue New York, New York 10016-5895 212-251-5321 FAX: 212-251-5490

January 14, 2000

Michael J. Karlin, F.S.A., M.A.A.A. Senior Vice President & Actuary

> Ms. Janet E. Phipps Director Department of Management and Budget and Retirement Board Michigan State Employees Retirement System P.O. Box 30176 Lansing, Michigan 48909

Ladies and Gentlemen:

The Michigan State Employees Retirement System (MSERS) is funded on an actuarial reserve basis. The basic financial objective of MSERS is to establish and receive contributions that remain approximately level as a percentage of active member payroll over a long period of years.

Actuarial valuations are prepared annually to determine MSERS's actuarial liabilities and the employer contributions required to fund the System in accordance with the actuarial reserve funding provisions of the governing State Statute. The most recent actuarial valuation as of September 30, 1999 included a total of 93,334 members of MSERS. The actuarial value of MSERS's assets amounted to approximately \$9.65 billion on September 30, 1999.

The actuarial assumptions used in the 1999 valuation are the same as those used in the previous annual actuarial valuation. These assumptions produce valuation results which we consider to be reasonably indicative of the plan's underlying cost. Also, in our opinion, the actuarial assumptions and methods used for funding purposes meet the parameters for the disclosures presented in the financial section by GASB Statement No. 25.

Our actuarial valuation of MSERS as of September 30, 1999 was performed by qualified actuaries in accordance with accepted actuarial procedures. In our opinion, the calculated contribution rate meets the fundamental objectives of State law. Based on the 1999 valuation results, it is also our opinion that the Michigan State Employees Retirement System continues in sound condition, in accordance with actuarial principles of level cost financing.

Most of the information used in the supporting schedules in the Actuarial and Statistical Sections, as well as the Schedules of Funding Progress and the employer contributions shown in the Schedules of Employer Contributions in the Financial Section of this report were provided by our firm.

Sincerely,

Michael Karlin, F.S.A., M.A.A.A. Senior Vice President & Actuary

Muhael Karlin



### **Summary of Actuarial Assumptions and Methods**

- 1. The investment return rate used in making the valuations was 8% per year, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of investment return in excess of the inflation rate. Considering other financial assumptions, this investment return rate translates to an assumed long term real rate of return of 4%. Adopted 1994.
- 2. The mortality table used in evaluating allowances to be paid was the 1994 Group Annuity Mortality Table, set forward one year for both men and women. Adopted 1998.
- 3. Sample probabilities of retirement with an age and service allowance are shown in Schedule 1 on the next page. Adopted 1998.
- 4. Sample probabilities of withdrawal from service and disability, together with individual pay increase assumptions, are shown in Schedule 2 on the next page of this report. Adopted 1998.
- 5. Total active member payroll is assumed to increase 4% per year. This represents the portion of the individual pay increase assumptions attributable to inflation. Adopted 1994.
- 6. An individual entry age actuarial cost method of valuation was used in determining age and service allowance actuarial liabilities and normal cost. Adopted 1975. Unfunded actuarial accrued liabilities are financed over a period of 50 years and over a declining 40 year period for years beginning October 1, 1996. Adopted 1996.
- 7. During 1998, the Department of Management and Budget approved the use of market value of assets as of September 30, 1997 for valuation purposes. For investment gains and losses that occur after that date, a 5-year smoothing technique will be used. Specifically, the excess (shortfall) of actual investment income (including interest, dividends, realized and unrealized gains or losses) over the imputed income at the valuation interest rate is considered the gain (loss), which is spread over five years.
- 8. The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.
- 9. The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA). The assumptions used in the actuarial valuations were adopted by the System's board after consulting with the actuary.

# **Summary of Actuarial Assumptions and Methods** (Continued)

**SCHEDULE 1** Percent of Eligible Active Members Retiring Each Year

Retirement			
Ages	<b>Correction Officers</b>	<b>Conservation Officers</b>	Other Members
45		16 %	
48		16	
51	25 %	16	
55	15	16	20 %
58	12	15	15
61	15	15	15
64	22	22	22
67	25	25	25
70	50	50	50
75	100	100	100

**SCHEDULE 2 Separation From Active Employment Before** Age & Service Retirement & Individual Pay Increase Assumptions

Sample Ages	Years Service	Percent of Active Members Withdrawing Within Next Year (Men and Women)	Percent of Active Members Becoming Disabled Within Next Year	Percent Increase In Pay During Next Year
All	0	20.00 %		
	1	14.00		
	2	9.00		
	3	7.00		
	4	5.50		
25	5 & Over	5.50	0.01 %	11.50 %
35		3.50	0.04	5.70
45		2.25	0.26	4.75
55		1.75	0.65	4.24
60		1.75	0.90	4.00

## **Actuarial Valuation Data**

### Schedule of Active Member Valuation Data

Valuation Date Sept. 30	Number	Reported Annual Payroll*	Average Annual Pay	% Increase	Average Age	Average Service
1990	69,558	\$ 2,,227,755	\$ 32,026	6.5 %	41.2	10.9 years
1991	65,595	2,236,336	34,093	6.5	42.1	11.9
1992	64,248	2,189,752	34,083		42.2	11.9
1993	63,906	2,184,972	34,190	0.3	42.6	12.1
1994	64,923	2,271,304	34,985	2.3	43.0	12.5
1995	65,133	2,348,534	36,058	3.1	43.2	12.7
1996	63,807	2,515,420	39,422	9.3	43.8	13.0
1997	55,434	2,273,203	41,007	4.0	43.7	13.1
1998	49,717	2,107,996	42,400	3.4	44.8	14.8
1999	49,612	2,213,851	44,623	5.2	45.9	15.8

<sup>\*</sup> In thousands of dollars. Base pay only excluding 3 1/2% for overtime and shift differentials through 1995. Greater of base pay or prior year actual earnings beginning in 1996.

# Schedule of Changes in the Retirement Rolls

Year	Add	led to Rolls	olls Removed from Rolls Ro		Rolls-	End of Year	% Increase	Average
Ended Sept. 30	No.	Annual Allowances*	No.	Annual Allowances*	No.	Annual Allowances*	in Annual Allowances	Annual Allowances
1990	1,449	\$ 17,453	773	\$ 5,552	24,863	\$ 180,696	7.1 %	\$ 7,268
1991	1,493	20,168	790	5,936	25,566	194,928	7.9	7,624
1992	4,177	55,336	887	6,652	28,856	243,612	25.0	8,442
1993	1,105	18,468	786	4,887	29,175	257,193	5.6	8,816
1994	1,888	22,636	1,101	6,442	29,962	273,387	6.3	9,124
1995	1,566	23,575	966	6,268	30,562	290,694	6.3	9,512
1996	1,595	24,527	1,064	7,288	31,093	307,933	5.9	9,904
1997	6,098	121,005	1,068	7,878	36,123	421,060	36.7	11,656
1998	1,279	21,085	1,217	9,689	36,185	432,456	2.7	11,951
1999	1,409	21,227	1,248	9,516	36,346	444,167	2.7	12,221

<sup>\*</sup> In thousands of dollars

### **Prioritized Solvency Test**

The State Employees' Retirement System's funding objective is to meet long term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due -- the ultimate test of financial soundness. Testing for level contribution rates is the long term solvency test.

A prioritized solvency test is another means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with: (1) active member contributions on deposit; (2) the liabilities for future benefits to present retired lives; and (3) the liabilities for service already rendered by active and inactive members. In a system following the discipline of level percent of payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) is normally partially covered by the remainder of present assets. Generally, if the System has been using level-cost financing, the funded portion of liability 3 will increase over time. Liability 3 being fully funded is not necessarily a byproduct of level percent of payroll funding methods.

The schedule below illustrates the history of the liabilities of the System and is indicative of the System's policy of following the discipline of level percent of payroll financing.

Actuarial Present Value of					
Accru	ed Liabilities	(\$ in Millions)			
(1)	(2)	(3)			

Valuation Date	Active Retirants Member and			Active and Inactive (Employers Members Valuation				Portion of Present Value Covered by Assets					
Sept. 30	Contribu	tions	Beneficiarie	s Fina	nced Portion	<u>n)</u>	Assets	(1)	(2)	(3)	(4)***		
1990#	\$ 83		\$ 1,715	\$	2,668	\$	4,106	100 %	100 %	86.6 %	92.0 %		
1991#	82		1,870		2,987		4,347	100	100	80.2	88.0		
1992	83		2,413		2,984		4,533	100	100	68.3	82.7		
1993+	72		2,561		3,539		5,043	100	100	68.1	81.7		
1994 <sup>@</sup>	73		2,778		3,709		5,476	100	100	70.8	83.5		
1995	72		2,751		4,038		6,090	100	100	80.9	88.8		
1996	55		2,844		4,248		6,678	100	100	88.9	93.4		
1997	3		4,300		3,910		7,516	100	100	82.2	91.5		
1998	27		4,360		3,987		9,109	100	100	118.4	108.8		
1998 <sup>@</sup>	27		4,484		3,986		9,109	100	100	115.4	107.2		
1999	35		4,538		4,456		9,648	100	100	113.9	106.9		

<sup>&</sup>lt;sup>®</sup> Revised actuarial assumptions.

<sup>#</sup> Benefits amended.

Revised asset valuation method.

<sup>\*\*\*</sup> Percents funded on a total valuation asset and total actuarial accrued liability basis.

# **Summary Of Plan Provisions**

Our actuarial valuation of the System as of September 30, 1999 is based on the present provisions of the State Employees' Retirement Act, which are summarized in this section.

#### Regular Retirement (no reduction factor for age)

Eligibility — Age 55 with 30 years service, or age 60 with 10 or more years service. Corrections Officers may retire at age 51 with 25 or more years service, or age 56 with 10 or more years service. Conservation Officers may retire after 25 years of service regardless of age.

Final Average Compensation — Regular retirement benefit is based on final average compensation (FAC), which is the average of highest 3 consecutive years (2 years for Conservation Officers).

Annual Amount — Total service times 1.5% of FAC. For members with 20 or more years of service, a \$3,000 minimum annual benefit is payable. Corrections Officers receive an additional temporary supplement to age 62 equal to the product of supplemental service times 0.5% of FAC. Conservation Officers retiring after 25 years receive a benefit equal to 60% of FAC.

#### Early Retirement (age reduction factor used)

Eligibility — Age 55 with 15 or more years service.

Annual Amount — Computed as regular retirement benefit but reduced by 0.5% for each month under age 60.

### Deferred Retirement (vested benefit)

Eligibility — 10 years of service (5 years for unclassified persons in the executive or legislative branch). Benefit commences at age 60.

Annual Amount — Computed as regular retirement benefit based on service and FAC at termination.

#### Duty Disability Retirement:

Eligibility — No age or service requirement.

Annual Amount — Disability after age 60: Computed as regular retirement benefit with minimum benefit based on 10 years service. Disability prior to age 60: To age 60, benefit is two-thirds of FAC but limited to \$6,000 per year. Additional limitation such that benefit plus workers' compensation does not exceed final compensation. After age 60, benefit is recomputed as a regular retirement benefit with service granted for period in receipt of disability benefit before age 60 (benefit not reduced after age 60).

### Non-Duty Disability Retirement:

Eligibility — 10 years of service.

Annual Amount — Computed as regular retirement benefit based on service and FAC at time of disability. Minimum annual benefit is \$600.

### **Summary Of Plan Provisions (continued)**

#### **Duty Death Before Retirement**

Eligibility — No age or service requirement. Also applies to duty disability retirant who dies within 3 years of disability and before age 60.

Annual Amount — Accumulated employee contributions are refunded. Surviving spouse receives annual benefit of one-third of final compensation until death. Unmarried children under age 18 each receive an equal share of one-fourth of final compensation (if no spouse each child receives one-fourth, to a maximum of one-half for all children). If no spouse or eligible children, each dependent parent receives one-sixth of final compensation. Total benefits payable are limited to \$2,400 per year. Additional limitation such that benefits plus workers' compensation does not exceed final compensation.

#### Non Duty Death Before Retirement

Eligibility — 10 years of service. In the case of a deceased vested former member, the survivor benefit commences when the deceased former member would have attained age 60.

Annual Amount — Computed as regular retirement benefit but reduced in accordance with a 100% joint and survivor election.

### Post-Retirement Cost-of-Living Adjustments

One-time upward adjustments have been made in 1972, 1974, 1976, 1977 and 1987. Beginning in 1983, some benefit recipients share in a distribution of a portion of investment income earned in excess of 8% annually (supplemental payment). Beginning in 1988 all benefit recipients are eligible for automatic 3% annual (non-compounded) benefit increases, with a maximum \$300 annual increase. Eligibility for the above benefits:

Retired before October 1, 1987 Greater of supplemental payment or the combination of the 1987 one-

time adjustment and the automatic increases.

Retired on or after October 1, 1987 Automatic increases only.

#### Post-Retirement Health Insurance Coverage

Persons in receipt of retirement allowance (including members who did not retire directly from the System, but come from a vested deferred status), and their dependents, are eligible for 95% State-paid health insurance coverage and 90% State-paid dental and vision insurance

#### **Member Contributions**

None

#### **Defined Contribution**

New employees hired on or after March 31, 1997, become participants in Tier 2 (i.e., a defined contribution plan) rather than Tier 1 (i.e., the above described defined benefit plan).

Active members on March 30, 1997, had an opportunity to irrevocably elect to terminate membership in Tier 1 and become participants in Tier 2. Elections were in writing and submitted between January 2, 1998 and April 30, 1998. Such members became Tier 2 participants on June 1, 1998, and had the actuarial present value of their Tier 1 accrued benefit transferred into Tier 2 by September 30, 1998.

# STATISTICAL SECTION

Schedule of Revenues by Source Schedule of Expenses by Type Schedule of Benefit Expenses by Type Schedule of Retired Members by Type of Benefit Schedule of Average Benefit Payments Ten Year History of Membership

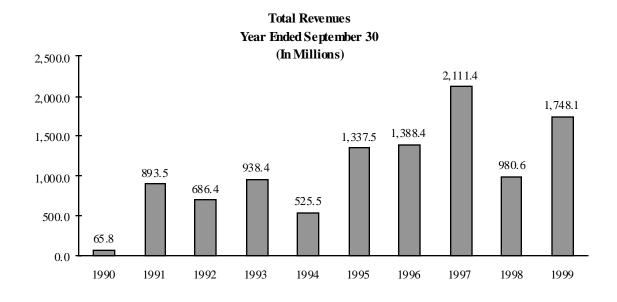
# STATISTICAL SECTION

### Schedule of Revenues by Source

Fiscal Year		<b>Employer Contributions</b>						
Ended Sept. 30	Member Contributions	Dollar	% of Annua Covered Payr					Total
1990	\$ 2,733,598	\$ 188,86	3,034 8.48	%	\$	(125,829,294)	\$	65,767,338
1991	4,416,336	227,34	8,243 10.17			661,760,771		893,525,350
1992	4,810,700	285,42	4,393 13.03			396,188,599		686,423,692
1993	4,068,696	371,90	2,232 17.02			562,436,683		938,407,611
1994	2,257,216	389,72	8,590 17.16			133,510,369		525,496,175
1995	2,260,510	422,29	4,609 17.98			912,938,131		1,337,493,250
1996	2,619,067	431,09	4,371 17.14			954,696,384		1,388,409,822
1997	15,858,366**	410,23	1,627 18.05			1,685,326,508		2,111,416,501
1998	9,777,845	259,79	9,179 12.32			711,056,989		980,634,013
1999	11,047,646	265,80	6,233 12.25			1,471,244,852		1,748,098,731

Includes financing for early retirement pensions. Fiscal year 1999 also includes amount received for DC Savings (see Note 2 to the financial statements in the Financial Section).

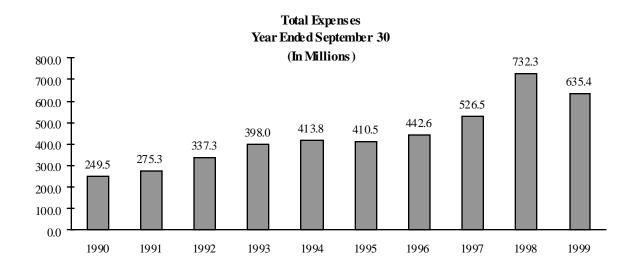
Increase is attributable to purchase of service credit in connection with "early out" retirement.



### Schedule of Expenses by Type

Fiscal Year Ended Sept. 30	Benefit Payments*	Refunds and Transfers	Administrative Expenses	Total
1990	246,339,702	125,828	2,993,159	249,458,689
1991	271,569,768	126,406	3,607,115	275,303,289
1992	333,082,770	123,792	4,047,661	337,254,223
1993	394,557,537	99,369	3,412,142	398,069,048
1994	409,975,308	92,153	3,777,812	413,845,273
1995	406,140,322	80,453	4,268,833	410,489,608
1996	439,056,397	30,082	3,489,761	442,576,240
1997	513,359,239	7,848,649**	5,247,943	526,455,831
1998	593,453,930	134,533,763**	4,297,092	732,284,785
1999	630,346,729	728,366	4,330,623	635,405,718

<sup>\*</sup> Includes health benefits.



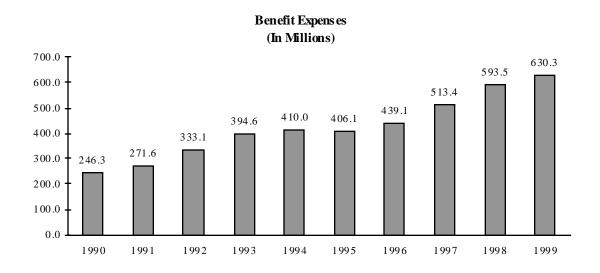
<sup>\*\*</sup> Includes transfers to defined contribution plan in connection with the "early out" retirement.

# STATISTICAL SECTION

### Schedule of Benefit Expenses by Type

Fiscal Year Ended Sept. 30	Regular Benefits	Disability Benefits	Supplemental Check	Health Benefits*	Total
1990	164,701,113	12,231,653		69,406,936	246,339,702
	, ,	, ,		, ,	
1991	178,896,021	11,827,319		80,846,428	271,569,768
1992	212,280,362	13,850,266		106,952,142	333,082,770
1993	245,615,207	14,725,503		134,216,826	394,557,536
1994	256,660,402	16,672,201		136,642,705	409,975,308
1995	269,206,552	20,494,647		116,439,123	406,140,322
1996	284,061,320	22,017,877	15,234,884	117,742,316	439,056,397
1997	331,964,200	26,069,505	24,832,674	130,492,860	513,359,239
1998	401,855,102	28,024,773	, ,	163,574,055	593,453,930
1999	417,313,133	28,227,807	678,314	184,127,475	630,346,729

<sup>\*</sup> Includes vision and dental benefits.



### Schedule of Retired Members by Type of Benefit September 30, 1999

Amount Monthly	Number of				Type of I	Retiren	nent *					Selected	Option	n**	
Benefit	Retirees	1	2	3	4	5	6	7	8	Reg.	Opt. A	Opt. B	Opt. E	Opt. E1	Opt. E2
\$ 1 - 200	1,329	669	424	8	156	34	20	1	17	437	391	342	130	16	13
201 - 400	5,007	3,180	907	27	679		156		58	2,192	1,392	925	372	64	62
401 - 600	5,844	3,489	603	403	886		280	4	179	2,900	1,560	939	349	44	53
601 - 800	4,696	3,115	377		646		238	29	291	2,120	1,293	904	275	44	60
801 - 1,000	4,022	2,685	252	1	419		173	46	446	1,787	1,169	782	174	47	63
1,001 - 1,200	3,723	2,608	186		230		120	35	544	1,606	1,105	711	181	59	61
1,201 - 1,400	3,026	2,235	143		94		82	36	436	1,066	953	693	200	42	72
1,401 - 1,600	2,246	1,797	75		52		43	46	233	793	702	484	164	44	59
1,601 - 1,800	1,735	1,481	44		21		27	61	101	510	572	339	178	53	83
1,801 - 2,000	1,340	1,168	29		8		15	69	51	341	476	276	141	47	59
Over 2,000	3,378	3,085	49		5		31	159	49	884	1045	769	330	154	196
Totals	36,346	25,512	3,089	439	3,196	34	1,185	486	2,405	14,636	10,658	7,164	2,494	614	780

#### \* Type of Retirement

- 1 Normal retirement for age & service
- 2 Survivor payment normal or early retirement
- 3 Duty disability retirement (incl. survivors)
- 4 Non-duty disability retirement (incl. survivors)
- 5 Survivor payment duty death in service
- 6 Survivor payment non-duty death in service
- 7 Retirees with supplemental benefits for early retirement incentive factors
- 8 Retirees with reduced benefits for early retirement reduction factors

#### \*\*Selected Option

Reg. - Straight life allowance

Opt. A - 100% survivor option

Opt. B - 50% survivor option

Opt. E - Social Security equated

Opt. E1 - Social Security equated w/100% survivor

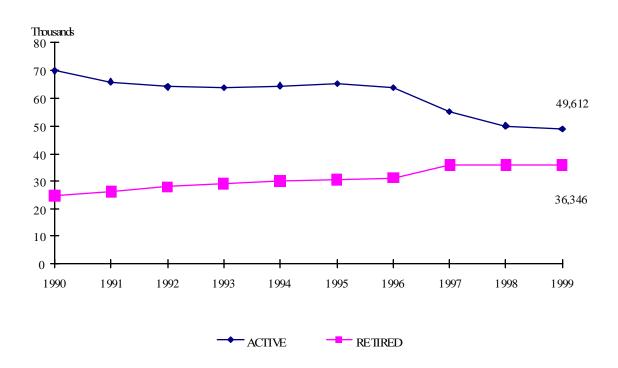
Opt. E2 - Social Security equated w/50% survivor option

# STATISTICAL SECTION

# **Schedule of Average Benefit Payments**

Retirement Effective Dates	Years Credited Service									
	0-5	5-10	10-15	15-20	20-25	25-30	30+	Total		
Period 10/1/94 to 9/30/95:										
Average Monthly Benefit	\$ 288	\$ 333	\$ 358	\$ 549	\$ 765	\$ 1,015	\$ 1,284	\$ 793		
Average final Average Salary	13,523	25,006	20,192	22,356	24,419	26,336	27,548	24,115		
Number of Active Retirants	313	414	5,939	6,198	5,575	5,075	7,048	30,562		
Period 10/1/95 to 9/30/96:										
Average Monthly Benefit	\$ 316	\$ 343	\$ 375	\$ 571	\$ 793	\$ 1,045	\$ 1,340	\$ 825		
Average final Average Salary	12,260	25,997	21,206	23,275	25,383	27,175	28,936	25,142		
Number of Active Retirants	341	429	5,977	6,311	5,636	5,149	7,250	31,093		
Period 10/1/96 to 9/30/97:										
Average Monthly Benefit	\$ 367	\$ 357	\$ 400	\$ 632	\$ 877	\$ 1,272	\$ 1,536	\$ 971		
Average final Average Salary	11,007	26,932	22,665	25,373	27,707	32,426	33,096	28,415		
Number of Active Retirants	396	440	6,207	6,947	6,410	7,030	8,693	36,123		
Period 10/1/97 to 9/30/98:										
Average Monthly Benefit	\$ 373	\$ 369	\$ 414	\$ 651	\$ 901	\$ 1,298	\$ 1,571	\$ 996		
Average final Average Salary	10,322	28,458	23,509	26,087	28,395	33,076	33,906	29,148		
Number of Active Retirants	411	449	6,246	6,906	6,389	7,074	8,710	36,185		
Period 10/1/98 to 9/30/99:										
Average Monthly Benefit	\$ 375	\$ 379	\$ 433	\$ 673	\$ 926	\$ 1,329	\$ 1,600	\$ 1,018		
Average final Average Salary	9,939	29,279	24,597	26,881	29,163	33,685	34,435	29,846		
Number of Active Retirants	432	457	6,328	6,939	6,421	7,091	8,678	36,346		

# 10 Year History of Membership Fiscal Years Ended September 30



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### **ACKNOWLEDGMENTS**

The Michigan State Employees' Retirement System's Comprehensive Annual Financial Report is prepared by the Office of Retirement Services, Finance and Administration Division. Finance staff of the division for the fiscal year 1998-1999 report included:

Jennifer Ashton
L. Van Becker
Deb Braun
Steve Crippen, MBA, CPA
Al Juderjohn
Denise Omo
Paula Webb
Patty Wethy
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Darlene Workman, MBA, CPA

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